

Australian

MAY/JUNE 1978. ISSUE 90. Vol. 8 No. 9

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MODEL RAILWAY

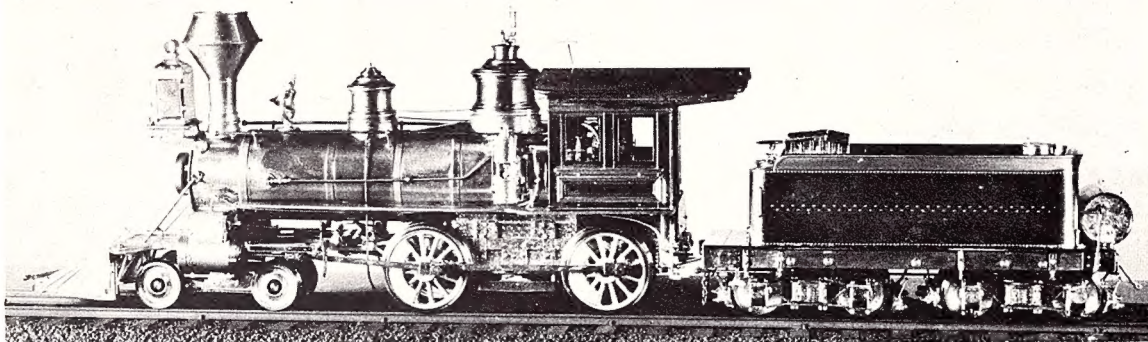
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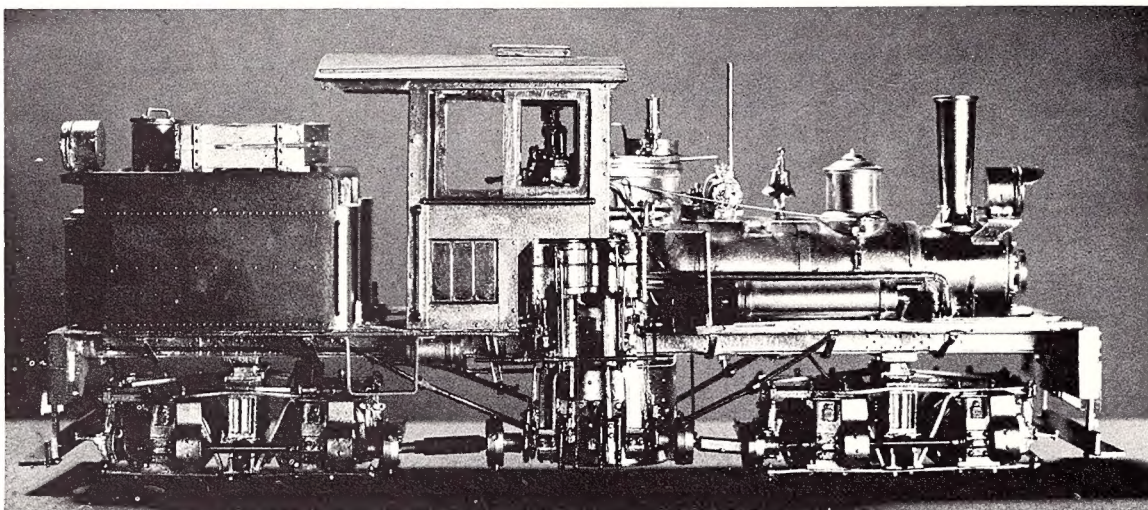
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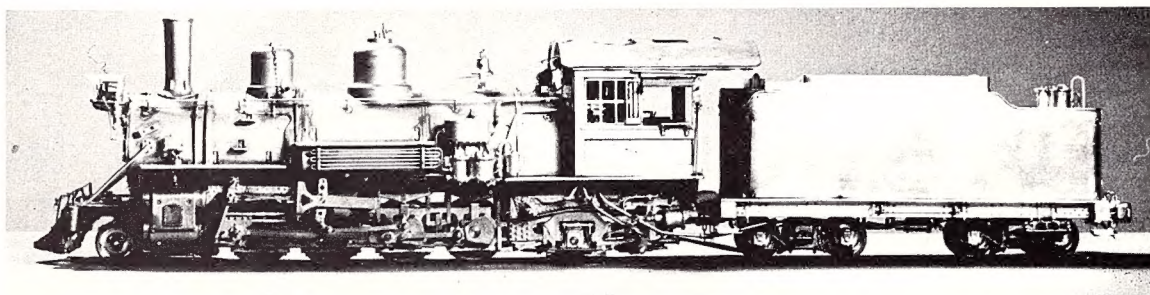
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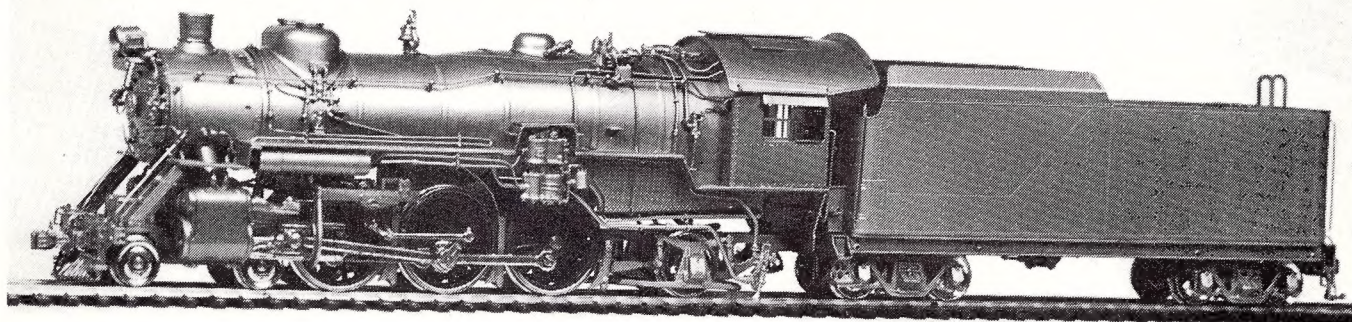
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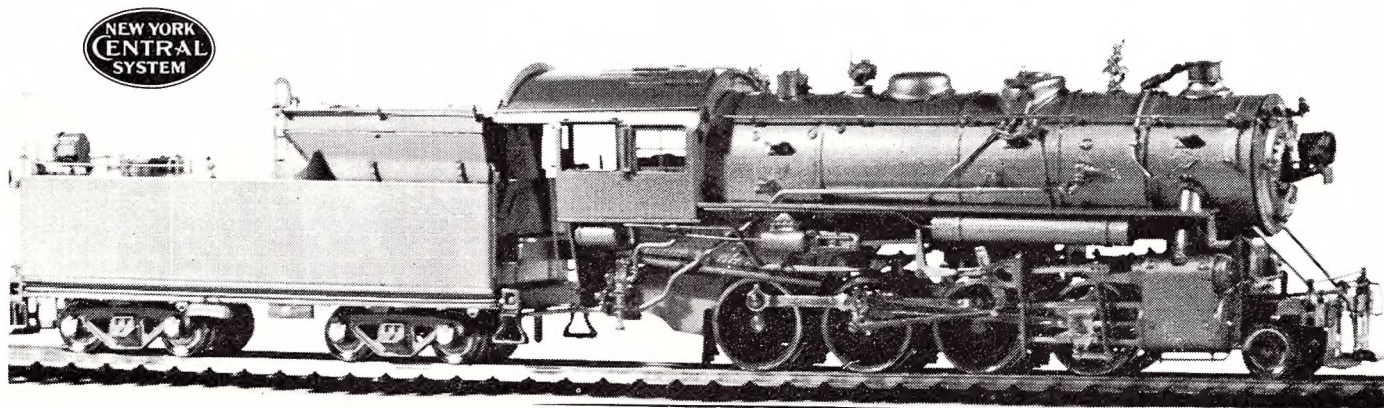
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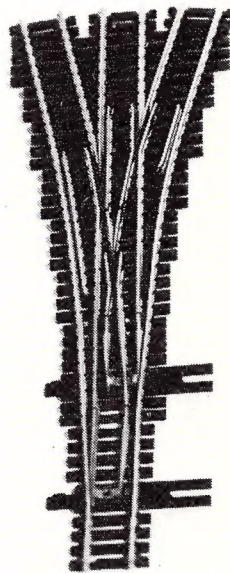
FROM THE SHOPS OF ALCO MODELS . . . NYC 'G-46H' SERIES 2-8-0. PRICE: \$161.80.

Other News from the Dockyard . . .

Brass models landed free of 35% Duty are not a dream for the future, but a reality of the present. Due to 'developing nation status' accorded Korea by the Australian Government. As a result, we have been able to offer our imports from this area at extremely keen prices which many clients and stockists alike have been quick to observe and take advantage of, whilst the opportunity prevails. As long as the provisions which make such keen pricing possible are maintained by our Government, we will continue to pass along the savings in our relevant pricing structure. Meantime, models slated to arrive from Korea about the middle of 1978 comprise of the following H0 Locomotives: Westside B. & O. 'U-1' 0-10-0, MA. & PA. No. 29 0-6-0, MA. & PA. No. 30 0-6-0, S.P. MK-11 2-8-2, S.P. MK-11 2-8-2 and B. & O. 'Q4d' 2-8-2. Key Models' A.T.S.F. '3450' 4-6-4 and H0n3 D. & R.G.W. 'C-19' 2-8-0. Sunset Models' Wabash 2-10-2, C. & O. 2-10-2 and U.P. '1242' 4-6-0. Production slated to follow in Korea, for the same distributors, will cover the following H0 Locomotives: Westside P.R.R. 'K-2' 4-6-2, G.N. 'S-2' 4-8-4, P.R.R. 'N2Sa' 2-10-2 with Pennsy Caboose, P.R.R. 'K-3' 4-6-2 and the A.T.S.F. 'Big Three' set comprising of the following locomotives — '3465' 4-6-4, '2900' 4-8-4 and '5011' 2-10-4. Key Models' USRA Heavy 2-10-2, A.T.S.F. '3400' 4-6-2, D. & R.G.W. 'M-68' 4-8-4 and USRA Heavy 4-8-2. Sunset Models' U.P. 4-12-2 '9000' Series and T. & P. '610' 2-10-4 . . . Operating Switch Stands are now available in H0 scale. Made by N.J. International, these are all brass, painted and jewelled, and come in five type: No. SS-11, Star Switch Stand; No. SS-12, Branch Line Switch Stand; No. SS-13, Main Line Switch Stand; No. SS-14, Low Ramapo Switch Stand and No. SS-15, High Ramapo Switch Stand. All priced @ \$5.25 each . . . In addition to the new developments in H0n2½ gauge illustrated above, we are now able to announce that our Liliput and other lines for 30 inch gaugers are now joined by the new German line, 'Bemo'. This Firm score a number of unique 'firsts' in their range, including Transporter Bogies for handling 16.5mm gauge rolling stock, along with the necessary 'match' Van, fitted with dual narrow/standard gauge buffer and coupling gear. Together with the interchange track section. Stocks will be available from all our outlets and the Bemo Brochure is available

for 75c, together with Price List. . . For fans of the U.P. Gas-turbine Locomotives, the promised H0 3-unit Coal Fired Gas-turbine, by Custom Brass, is due in the May/June period. This model will come painted and finished, and demand is expected to be heavy. Meantime, Alco Models have yet to commence production of their promised 3-Unit oil fired "Big Blow" which when it comes, will be unpainted . . . From "United", due about the middle of the year are the H0n3 D. & R.G.W./Unitah Water Car . . . More Tomalco H0n3 Car Kits are due in the February/March period, along with more Alexander Scale Models' wayside detail. Including new items appearing, unpriced, on our current H0 Fittings List . . . Alco Models' big H0 Virginia 3-Unit (A-B-A) Jack Shaft Electric Locomotive are due in April/May. Together with separate A Units . . . Now available from Westside are the H0n3 2-Dome Texaco Tank Cars @ \$57.45 ea. . . Illustrated with these notes is the advance sample of the new N scale 3-Way Turnout, by Shinohara. First stocks should be available by the time these notes appear in print . . . To match up with the Aster No. 1 Gauge Live Steam 3-Cylinder Shay Geared Locomotive, a Log Car is being added to the range and is expected to be available about the middle of the year. . . Heretofore, modellers working in H0n2½ gauge have been offered little by way of brass locomotives. Now 'Sango', of Japan, have supplied, in assembly kit form, limited

Continued on page 56



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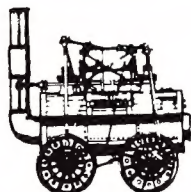
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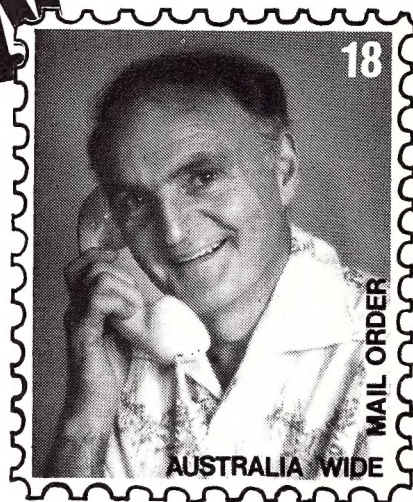
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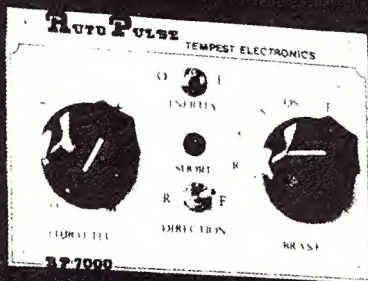
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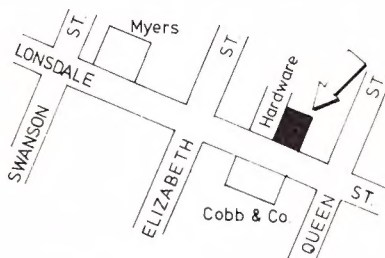
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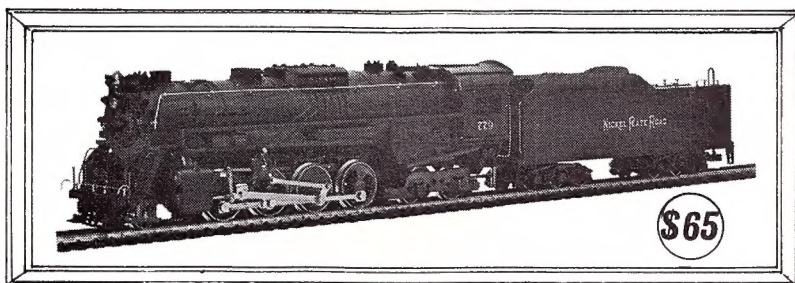
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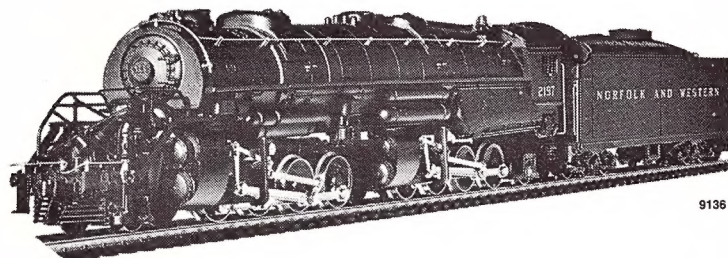
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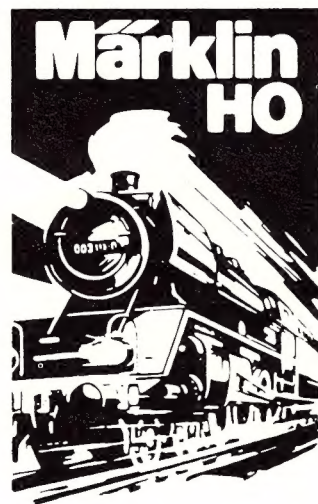
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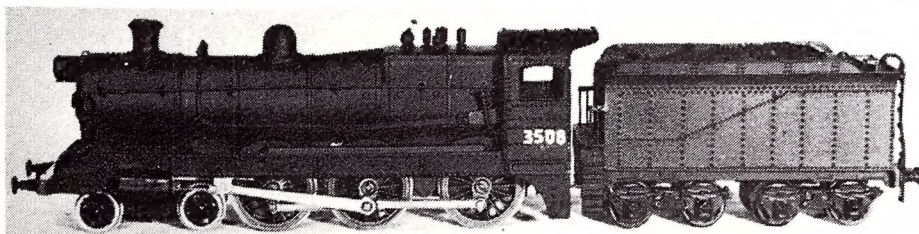
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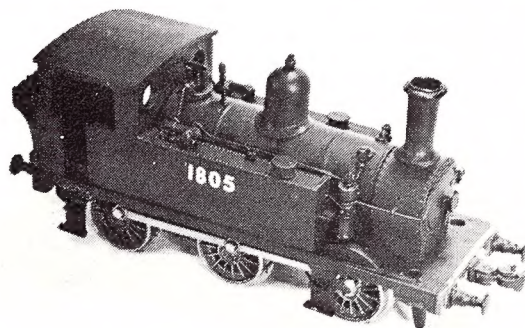
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*From: Bill Gardner,
Australian Model Craft Co.,
577 Dean St.,
Albury N.S.W. 2640
30th April 1978*

To: Readers Generally

Few Distributors of Model Railway Equipment are as deeply involved with the Hobby side of Model Railway as we are. There are some, and luckily for the Railway Modeller, there are some shops which do little else.

Because of this feature of our business, we have what might be termed - an integrated range of lines that extends to and covers most of the aspects of the hobby. Additionally, we try to give out information which is contributed by our customers or comes from our staff technicians, in the form of Give-Away folders or through the pages of "Model Railway Newsletter".

We sell to the hobby shops, and to those modellers who are living beyond the range of shops. We rely principally upon the hobby shops to transmit information and price lists to you. Trying once every two months to tell you of some of the interesting or exciting lines in stock, through the advertising pages of this Magazine, is like trying to put out a bush-fire with a glass of water. It goes nowhere that's noticeable.

For more than a quarter of a century, A.M.C. has been catering to the needs of the hobby and of hobbyists. Because our lines are so varied, from so many manufacturers, under so many brands, in so many gauges, with service division lines as well, at times we too find it difficult to keep all the segregations needed, going along.

Very rarely do we find we have to resort in advertising to being first and foremost a business. By that, I mean, rarely do we have to advertise something, MERELY because we'd like you to buy it. Oddments & discontinued lines, we'd like to have off the premises, because there's no romance or future in them. Usually, it is, that we show you by word and picture something that looks good, feels good and is as well priced as we are able to fix. We feel good about being able to do this, and we hope that if you buy one of these things that you will feel good about it too.

In any business, if it is not run along business-like lines, it very soon ceases by the owners getting tired of it, or it runs out of money or it goes broke. In these days, it takes a very great deal of "know-how" to run a business, and the more lines of differing types that it has the more complicated it becomes. A business of this type is specialised in that everything it has in stock goes to a particular type of retailer and in turn to people called "Railway Modellers", but because of the multitude of gauges and scales, parts and items, and the prototypes on which they are based, the whole becomes complicated, and there's no way to produce a simplification formula.

The business-side of the business for equal and like reasons, and multi-slants of sources of supply, importing, and the complication of laws and taxes, adds such variety that at least no staff member nor proprietor will ever die of boredom. It is in the general nature of Australians that they will complain about retailers and the service they hand out, even as retailers complain about Distributors, and Distributors think the manufacturers are not looking after them as well as

they might. Importers have plenty to complain about in strikes in the transport industries including shipping, and have to put up with climatic condition that might arise during transit times. Most of the factors are known to Distributors who tell the retail trade. They tell you, and often you don't believe them! Manufacturers must make goods by rotation, sometimes we get warned, as we were this week by one supplier to order (about 100 lines) needs to last till January, when the next following batch will be made. Very difficult to judge what you'll need over that period - and remember they have to be paid for ahead of delivery and ahead of demand.

Periodically, we issue a thing called Folder 50, which is all about A.M.C. and A.M.C. Distributed Products, and a new issue of it is about to be made. You should ask for a copy, as it will be a useful guide to what we handle and hence - do not handle. It also attempts to give some idea of ways in which the range we have is split up into Divisions & Sections.

Somebody once said to me. "Model Railway trading is a push-over. All you gotta do is to order goods and when they come - sell them!" What a lovely dream. Somebody else said recently "I can't imagine how you fill in your time....X and Z (naming a couple of staff members) seem to do all that is necessary. Recently it took a page of headings to set forth the areas of my jobs. What the eye does not see, the mind often doesn't know about!

Distributors, except for telephone conversations with retailers, and occasional calls on them, lose the opportunity for personal contact and consequent chat and yack, which makes Model Railway retailing such a pleasant occupation. If we went on, as we know some traders do, of viewing every potential sale as another contribution to a new car, speedboat, holiday house or etc., I think about 99% of the pleasure to be taken from business would be negated. The pleasure from a business such as ours is to have, to feel, to see the equipment and to ensure that it is in first class order when sold - particularly locomotives - and to try to ensure that the goods are suitable for the purposes for which designed.

Whilst it might seem to some of the old-timers in Model Railways in Australia, a bit like going backwards to the early fifties, to see us once again coming to you with goods split - in cross reference lists - into the basic Divisions of -

Locomotives, Passenger & Goods Rolling Stock.
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The Service Division (Books, Tools, Electrical, Raw Materials etc)

and because of Gauges applicable in the first three Divisions into Gauges, it does give some pleasure to once again do this.

As a matter of side interest, in conjunction with "Sentinel" Model Railway Products, there is coming up the start of what I hope will be a series of Australian Series kits. "Scale-Line" and "CHI" are already making lines of Aussie likeness.

Bill

AMRM

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WALLAN in MINIATURE
BUILD A FAST CLOCK
TRACK Part 4
V.R. 'P' Class (Explosive) VANS
CASEY'S BLACKSMITHS SHOP
LAYOUT DESIGN - Provide for Operation
HORSE BOXES OF S.A.R. - Part 1
NSWR
1978 SYDNEY TOY FAIR
INSURANCE FOR MODEL RAILWAY CLUBS
AMRM NEWS
MAILBAG
NSWGR STANDARD TURRETT TENDER
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CONTENTS

Occasionally we get referred to as "grown
men playing with toy trains". We also get
asked to "make them go fast", "make them
crash" or "blow them up, like they do in the
Adams Family" - this particular television
show has done more damage to the hobby
than its cost of making.

With these seemingly ridiculous requests
being put on us perhaps it is time to sit and
wonder just what type of image we portray to
the general public.

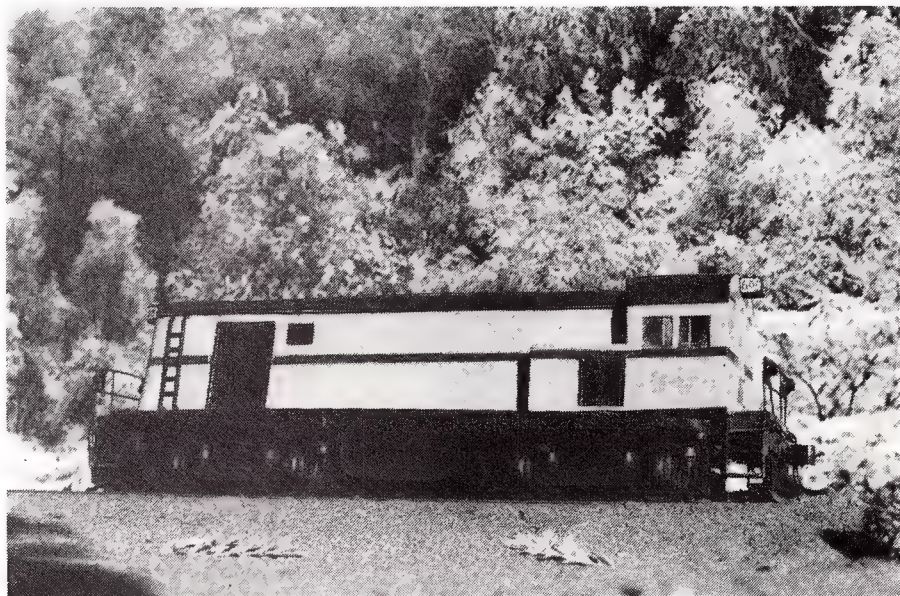
A reason that quickly comes to mind results
from what was representative of the hobby 30-
40 years ago. Back in those days a model
railway (to the majority) consisted of a circle of
'O' gauge track, a clockwork loco (of no variable
speed), and a string of wagons for it to pull.
We would set up the wagons, wind up the

loco, put it on the track and hope that its
speed still allowed it to stay on the track. I
can vividly remember it frequently jumping
the track, roaring up the hallway and down
the front steps. But I fixed that; I shut the
door! I still wonder if these were not the most
enjoyable times after all!

If I can recall those times so, too, can others
and to those people, that is what the hobby
represents. They are totally oblivious to the
fact that progress has drastically effected the
operating capabilities of the hobby. Electricity
and correct scale models are the order of the
day now.

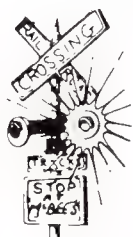
Fortunately, through the numerous exhibi-
tions, we are able to show that that clock-
work set of yesteryear has now evolved into
something more in the line of a near computer-
ised display, quite often depicting a well known
locale. To be able to see the change in expres-
sion on the viewers' face is evidence enough
that at least he now knows that we don't play
trains.

Allan Brown



Light engine 805 traverses a bushland scene. The H0 model of the S.A.R. 800 class diesel
was built by Vic Kollasche, using styrene sheet and an Athearn SW1500 chassis.

ON THE COVER: This issue we feature a photograph taken by Lionel Bates at Eden Hills (South
Australia) in 1951, SAR 507 at the head of a goods being the subject.



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The next release in this series will be a 1947 Ford Pick-up (Ute). Delivery will be approx. late June.

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Some new arrivals in stock for those who like a good kit to get their teeth into on a long winter's night. From Keystone Locomotive Works we have the Danby Saw Mill featuring board by board construction, over 70 metal castings, brass wire and chain, logs and bark included complete step by step plans and instructions. H0 scale. Price \$25.50. From the Structure Company we have a Small Freight House using stripwood, plastic and metal castings. H0 \$20.00 From Lytler & Lytler we have the Chicago Saloon an 1800s type building the prototype of which was in Silverton Colorado. Uses stripwood, castings etc. with good instruction book. H0 \$24.40 From Campbells Scale Models we have the Carstens Flop House (hotel) the usual excellent Campbells kit H0 \$37.50 From Fine Scale Miniatures we have the Calhoun Bros. Products Co, Rock Bunker. Featuring numerous metal castings, stripwood, wire, excellent instructions. This kit will keep you home in front of the fire for many nights. H0 scale, limited quantity. Price \$48.70

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Each issue gives details of S.P.s loco roster etc. for that year and features one of the Diesel types eg. 1972 features S.P.s E.M.D. made locos.

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If, after reading the Big Boy book you are unhappy with the detailing on your plastic Big Boy or Challenger, why not buy a Cal Scale Super detailing kit? (From McBEES naturally) containing 150 fine lost wax castings. Priced at \$26.50 the castings can also be used for detailing Challangers.

MAGAZINES

While on the subject of reading matter we would like to bring to your attention some of the lesser known magazines we stock.

PACIFIC NEWS published monthly at \$1.00 a copy. This magazine deals with news about the U.S. western roads including Santa Fe, U.P., S.P., Burlington etc.

PROTOTYPE MODELER published bi-monthly at \$1.95 a copy. This magazine is strictly modelling – the articles deal with detailing (indeed super-detailing) rolling stock and locos from many different roads across the U.S.A. using items from Athearn, Atlas etc. as a base. An invaluable magazine for the U.S. modeller who wants to be "right".

MODELL EISENBAHN (in German) published monthly at \$2.00 a copy. Articles on Continental prototype and models. We post magazines in a padded post bag – rates are 40c for a single magazine, 75c for 2, \$1.00 for 3, or \$1.40 for 4 or more.

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WALLAN in MINIATURE

Featuring Victorian prototype modelling at its best, in N scale. Story by Peter Matthews, photos by Peter Gibbs.

The Northern Model Railway Society, centred in the northern suburbs of Melbourne set about several years ago, developing an exhibition layout which had its first public showing at the 1977 Melbourne Exhibition in the Camberwell Civic Centre.

The layout is an accurate working diorama of an actual station and environs about 62 kms north of Melbourne.

History

The major feature of Wallan, its large bank of sidings, came into being to handle the traffic from the Heathcote branch line which joins the main North South line at the crest of the long climb over the Dividing Range.

During its heyday the station boasted first a small turntable and a single stall engine shed. Both these structures are now gone but it is still possible to see the earthworks of a later, larger turntable beside the main yard — together with a coaling stage and ornate water crane.

Traffic activity ceased when the Heathcote line closed; the extensive sidings now being used to store V.R. T vans and a motley collection of four wheel open wagons. Running behind the sidings the standard gauge line which divides at this point into what is called the "Wallan Loop", 36.25 miles from Spencer Street Station.

The Society members chose to model Wallan because, although it wasn't big on scenic grandeur, the sidings gave promise of complicated shunting movements while three main lines would allow plenty of through trains to circulate — a must for exhibitions.

THE LAYOUT

Baseboards

Although the layout is situated more or less permanently in a suburban garage, portability was a must if Wallan was to go on show. Thus the baseboards are made from standard flush doors, yes that's right, doors — cut where necessary to fit the track plan and then dowelled together for rigidity and accurate track alignment. The roadbed of 3/16" chipboard was cut to suit the track plan and glued to "sleeper" type strips of 3/4" chipboard spaced 2" apart. Chipboard was used in preference to strip wood for the accuracy of height needed between adjacent strips.

The spaces between the strips allow easy passage of point rodding and track wires, thus allowing the underside of the baseboard doors to remain free of clutter and protruding wires.

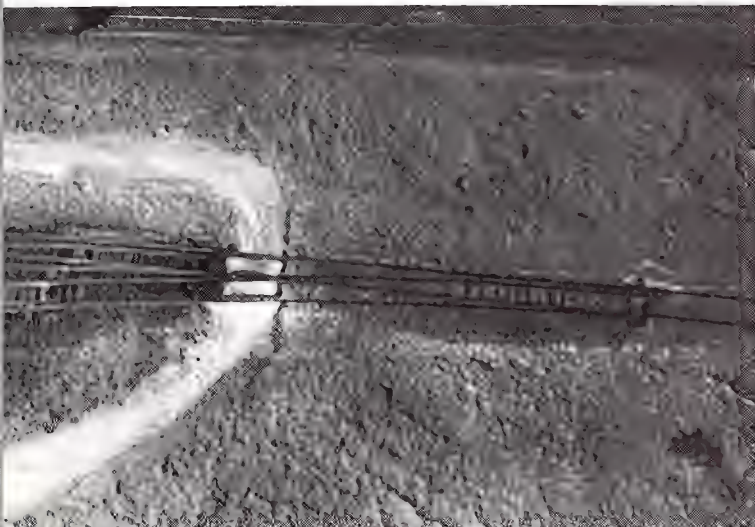
The baseboards are held together by hinges with removable pins and then locked by suitcase hinges. Club members believe this is one



An R class locomotive heads the pick-up goods enroute to Melbourne. An A2 waits its turn of duty later in the day.



Wallan yard and the northern end of the station area. A full length train of four-wheelers heads south soon to be scattered through various points of the Melbourne industrial network.



Handmade pointwork allows for smooth and troublefree running on the layout, and the preference for large radius helps to add distance to the visual effect.



A small watering hole in what is otherwise a flat dry area.

area that requires some refinement as it does need a fair effort to pull the baseboards together into the final closed loop.

Track

Peco Streamline "N" gauge track is used throughout and ballasted up to sleeper level with Aquadhere bonded sieved bluestone. The ballast started life as crushed rock or stone dust and was used as a cheap if strenuous method of obtaining the quantity of ballast needed.

The rail sides were painted a rust colour to increase prototypical appearance. By concocting an appropriate colour from PVA art paints and applying carefully with a small brush.

The combination of ballast and "rust" paint is quite effective in hiding the high iron effect of Peco Code 80 rail.

Pointwork

All pointwork was handmade to achieve the dual criteria of live frogs and size to fit the prototype track plan. Most of the 33 points are No 7 with several being No 10 and one a No 12.

The point construction developed by the Club is interesting in that it allows easy production of fine angled frogs and point blades. A detailed description of construction methods is currently being prepared by club members and will be published in a future issue of AMRM.

Point operation is mostly by direct wire links to ex US aircraft bomb aimer switches — used because of their solidarity and strong positioning springs. Where the wire rods pass through areas to be plastered they are encased in ordinary drinking straws to prevent jamming.

Scenery

The entire diorama is built up from plaster laid on caneite — used to make up the height difference between the raised track and the base door. A small hill at one end was made by the hard shell technique using newspaper balls to attain the right height and contour. The hill was given a thick layer of plaster to improve strength for handling during transport.

The surface treatment over the whole layout is basically zip texturing in that the surface was stippled with soupy plaster applied with a brush. It was then given an overall spray of brown dye-water to simulate the clay type soils of the region and finished by sifting on various mixtures of plaster and cement colours.

For those readers who want to try this method, here are some more details:

Plaster: The plaster used was a grade known as 'Dental Plaster' a fine grain, strong plaster which cures quite rapidly. Vinegar was found to be an effective retarder of the curing process. For Victorian readers the plaster can be obtained in 80 lb bags from Abel Lemon Pty. Ltd., 93 Ricketts Rd., Mount Waverley. In other cities a look in the Yellow Pages under plaster should dig up a suitable supplier.

Pigments: It was found that only inorganic colours are safe to use with plaster. Thus cement colouring, available from most hardware stores, was used for zip texturing yellows, browns and greens. (Note: It is suggested that you steer clear of straight green as it requires a lot of yellow and some brown to look acceptable.)

Spray colours: Instead of mixing colours straight into the plaster prior to application it is easier to spray on afterwards using water diluted Dulux (Plastic) paint tinters which come in handy dispensing units which are easy to use and clean up afterwards.

Bonding: If parts or the whole of your layout requires a lot of handling, the zip texturing needs protection. This can be easily done by spraying with a solution of Aquadhere, (1 part glue to 4 parts water with a few drops of detergent added to assist absorption) which seals the surface and stops it powdering.

Buildings

Modelling an Australian landscape can often be unrewarding because of the lack of stark grandeur so evident in American and

Continued on page 15.



Overall view of Wallan. The passenger train on the left is destined for Melbourne. The broad gauge yards at Wallan can hold a sizeable assortment of vehicles.



An assortment of interstate stock takes the standard gauge main, Sydney bound.



The Wallan area, with the broad gauge in the foreground and the standard gauge at the rear.

BUILD A FAST CLOCK

by Stewart Sloggett

The concept of scaling time is known to most modellers. It enables the lengthening of time between two points on a layout, the reduction in the length of a scale mile (or "smile" as it has been called) and the compilation of a realistic timetable for even small layouts. On larger layouts scaling time ought to be part of the modeller's strategy.

This article describes a simple way of making a fast clock, scaling time to about 7 or 8 to 1. It takes about 1 to 2 hours to complete.

Buy a "Five Rams" kitchen clock (or one with a larger dial) made in China, it is available at Woolworths for \$3.99 to \$4.50. Remove the back bell panel and unscrew its mounting. Remove the front casing, pull off the second, minute and hour hands and take off the dial by prising back the lugs with pliers.

We can then have a good look at the mechanism inside. It consists of a circular frame with various gears inside two plates. One frame is fixed to the frame ("frame plate") and one at the back ("back plate").

How Does the Clock Work?

Refer to Fig. 1. On the front of the frame plate is the second hand shaft; it is surrounded by two concentric sleeves supporting the hour hand and the minute hand respectively. The gearing through axle 2 reduces the minute hand rotation 12:1 to the hour hand and is driven by a pinion on axle 4. Between the plates axle 4 is driven by a gear on axle 3, the main spring wind of the clock. By gears on axle 5 it reduces 60:1 to the second hand on axle 1. On axle 1 there is a further reduction via axles 6, 7 and 8 to the spring pendulum and flywheel, which, together with the flywheel

fine control, determines the pace of unwinding of the spring on axle 3 and hence the timing of the clock.

Our aim in making the fast clock is to remove the second hand, axle 1; invert axle 6 and mesh it with axle 5. This is done by rotating part of the frame containing axles 6, 7 and 8 around the bottom left support shaft, X (see Figs. 2 and 3), and by adjusting the height of the gear wheel on axle 5. Note that by doing this, in theory, we achieve a magnification of 6 teeth to 40 teeth or 6 2/3 times the speed of the clock. We also eliminate the second hand.

Procedure.

1. Cut through the backplate, as in Fig. 2, with a fine tenon saw or fret saw. There are some tight corners to manoeuvre into and out of here. Remove the smaller portion of the plate carefully for if there is any tension in the spring it will be unleashed suddenly.

2. Remove the front gearing by unscrewing the retaining spring. Also remove the alarm setting by unscrewing the knob at the back and pulling through. Then cut the frame plate as in Fig. 3. The most critical piece of cutting is on the frame plate adjacent to the axle 6 mount; it has to be far enough away not to injure the mount but as wide as possible in order to achieve good meshing between the gears on axles 5 and 6.

3. Remove the rest of the backplate carefully for the alarm spring may unwind suddenly. Remove all the alarm system for we are not concerned with it here, it can be replaced later if you like. Take care with the flywheel spring — the less touched the better.

4. Take out axle 1 (second hand) and

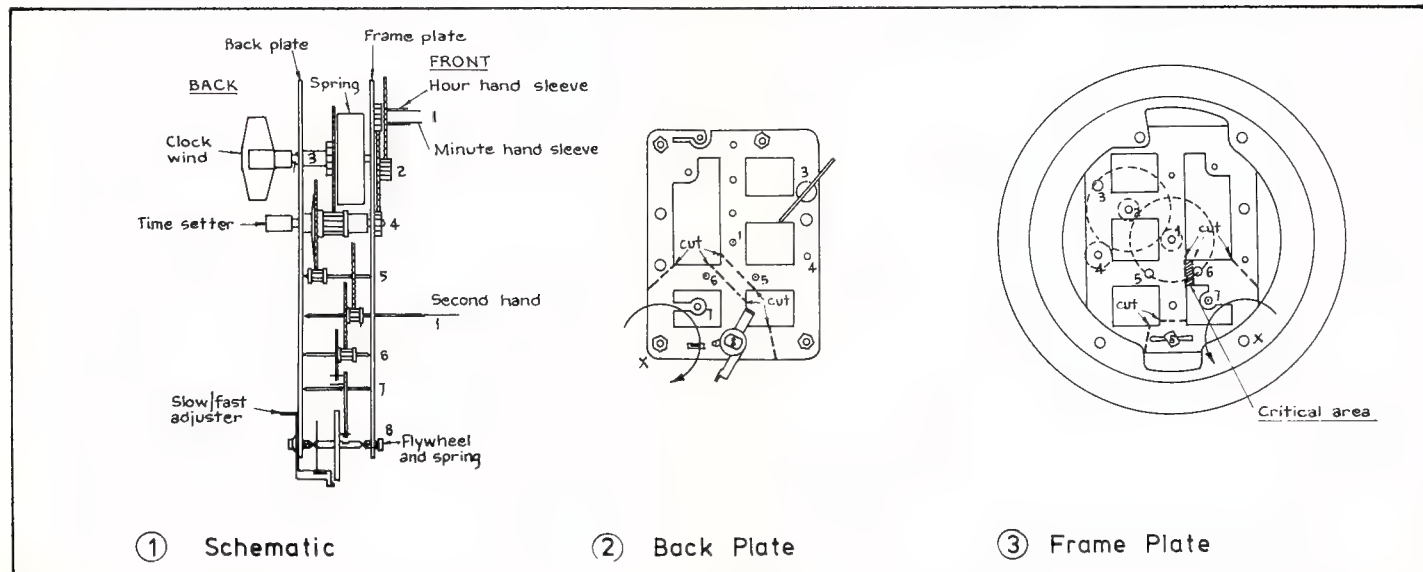
discard.

5. Invert axle 6 (with the gear having angled cogs). It should mesh normally with the pins on the crank on axle 7, but from the opposite side.

6. Remove axle 5. Place it, with the gear wheel down, on the slightly opened jaws of a pair of pliers. Take hold of the top of the axle, above the pinion, with needle nose pliers and hold it firmly. Be careful not to damage the tip of the axle. Gently tap the needle nose pliers with a hammer. The axle and pinion should move down into the pliers so that the gear wheel eventually touches the pinion. We have thus adjusted the height of the gear wheel.

7. We are now ready to reassemble the clock. The larger part of the frame should be assembled first and then the smaller. As you do this be sure that axle 6 goes in inverted. Rotate the smaller assembly so that the gear wheel on axle 5 meshes with the pinion on axle 6. Too tight a fit will stop the clock and too loose a fit will make the gears slip. It may be necessary to remove more of the "critical area" on the frame plate previously referred to so that more rotation is possible. Also the gear wheel may rub against one side of the pinion, this can be corrected by slightly bending the wheel with pliers. Having satisfied yourself that the mechanism works correctly put it back in its case.

If properly done 1 to 2 hours work will produce a good result. My clock has run for 36 scale hours ("hours"?), allowing a variable ratio of between 7½ and 8 to 1. This is, happily, faster than expected and a phenomenon I cannot explain. This means a whole day's timetable can be worked in about 3 hours.



WALLAN in MINIATURE

Continued from page 14.

European layouts. For this reason buildings and other structures play an important part in creating realism.

This is so with the Wallan layout. All the buildings have been carefully constructed by club members as exact replicas of the prototypical buildings using photographs, drawings and diagrams.

Care is evident in the display of many and varied structures including, believe it or not, a sewage pit.

Construction techniques and materials vary from Northeastern timber for the station build-

ings to styrene sheet, scribed balsa and polystyrene foam with card roof. Each structure was made by a club member using a construction method each was happiest with.

The fences, and there are a lot of them, are a mixture of commercial and adapted items. The garden fences are made from sections cut from the sides of square icecream containers.

More housing and assorted buildings are contemplated in the future, together with working signals, boom gates and automatic train control on the standard gauge line.

Motive Power and Rolling Stock

Naturally a layout which goes to such lengths to model an actual V.R. area must have suitable motive power and rolling stock. A number of the club members have been busy over the last year or so building up a variety of local vehicles needed to accurately portray the workings of the area and at the same time provide the prototype length trains

the layout permits.

Club members say they have found the modelling of Australian VR prototype vehicles highly rewarding — giving them a satisfaction they claim that American/British/European/Japanese ready to run modellers would never know.

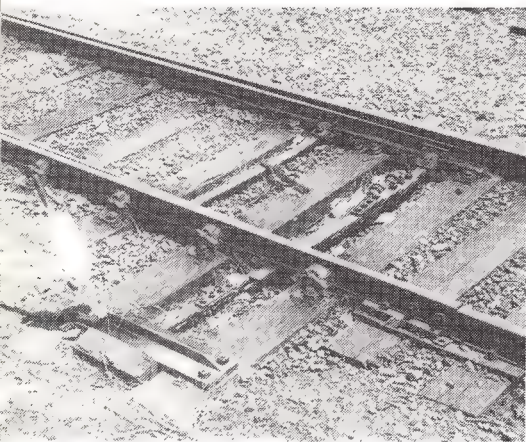
Motive power varies depending on which club members are present, but as our photographs show VR "S" and "X" class diesel locos are much in evidence together with a "B" and "T" class and two superb "R" class and A2 steam locos.

A wide variety of VR rolling stock is on hand including large numbers of GY open wagons, and T vans, QR's, UB's, ALX, VLX, VSX, VFX vans and Z and ZF guards vans. Carriage stock includes 12 E stock.

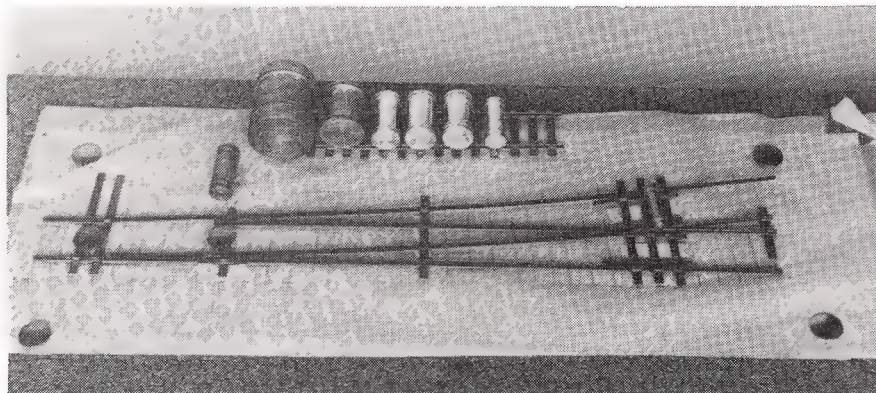
Further additions and expansion is contemplated by the club, for both their own pleasure and the delight of thousands of exhibition goers.



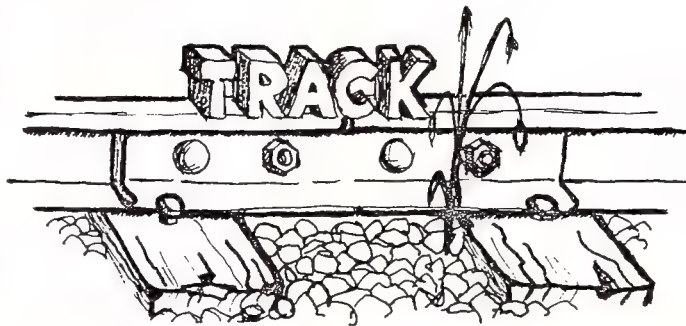
Electrically-operated turnout (wish they'd put their switch machined below the baseboard). Note the three tie-bars and locking bar and the trunking for cables. (SAR Broad Gauge).



Hand-operated turnout (SAR broad gauge). Note the Heath Robinson-type joint between rails of different sizes; shape of point; two tie-bars; ballast height; sleeper spacing; and the more noticeable older type of slide chairs.



A Code 55 H0 No. 6 turnout during construction. The large number of roller gauges are not necessary . . . they were only produced as an exercise. Desirable gauges are the check gauge (in position at the crossing), the gauge second down from the left on the short length of track and another for gauge-widening on curves.



FOUR

Clive Huggan describes the construction of turnouts in a two-part article.

The first three parts of 'Track', in issues 61-63 of AMRM, introduced some ideas on track construction designed to give an uniquely Australian appearance through sleeper size and spacing, ballasting practice and characteristically light rail. For readers who didn't see the series, here are the main features:

- * Medium-hard balsa sleepers were cut over-length, allowing rails to be laid more quickly and in more eye-pleasing configurations before trimming ends off using a blade with a spacer attached (but remembering to cut the odd sleeper out of alignment).
- * Fixing rails (Code 70 and below) with Goodyear Pliobond adhesive (dried on the rails overnight, then melted when the rails are in place using a soldering iron and heat sink). Adjustments can be made simply by re-heating.
- * Ballasting to the tops, and sometimes over, the sleepers.
- * Opting for construction methods that favour sound-deadening and making no concessions to reliability of running.

Why bother?

It's true that many modellers happily build structures and rolling stock, but balk at track construction because it must *work well* in addition to looking the part. During my travels since 'Track' first appeared, many modellers have commented on how simple and enjoyable track construction was, after they got started — and how they began to look critically at commercial track, especially after finding curves were almost always under-gauge. Nevertheless, 'laying your own' still attracts a lot of disbelief by people who haven't tried, who 'know Bill Bloggs who had a go and made a mess of it'. Such fears are groundless.

To anyone who has doubts about making his own track, I feel I should ask: "Why avoid this part of railway modelling if it can add to your over-all modelling skills? Why not build a short length in a freight yard, just for the experience? If you 'get the bug' and end up laying more, keep the money saved and buy a brass loco! If you don't like it, at least you'll know why if you've tried."

Before I launch into turnouts, let me emphasise that the successful track-layer isn't a track-nut ballast-counter/micrometer maniac. For example, most newcomers taking reasonable care in construction can scratch-

build track that will work at least as well as the bought variety. With turnouts it's not hard to beat the performance of any of the common commercial varieties on the market, which are limited in design by factors of production and handling. Our aim should be simply to make *absolutely trouble-free track*. Appearance comes as icing on the cake. Best of all is to end up with both.

The Task in Hand

There are two traps in writing about turnouts. First, the writer can delve onto so many of the pros and cons that the article becomes heavy. Secondly, if to keep it interesting he skims over some aspects, the inexperienced track-builder is left high and dry. The reason for this is that many facets of the turnout are inter-dependent on each other; the only answer is to describe the lot. So this article will be of the dreaded blow-by-blow variety — but with only one method discussed for each part of the turnout in order to be as brief as possible. I've chosen for this one — almost arbitrarily — construction that makes no compromise in reliability or appearance, within the limitations of the standards used. Realising that for various good reasons the choices won't be to everyone's liking, I intend to discuss alternatives in a further article.

Just to map out where I am heading, here is the basis of construction of this particular turnout:

- A left-hand No. 5 turnout has been chosen.
- Construction will be on a template (non-template construction will come later). This template is for SAR standard gauge, and is different in dimensions from UK and (more so) US practice. It is identical, or very close to, No. 5 turnouts on other Australian standard gauge systems.
- Printed circuit board (PCB) is used for sleepers at the parts of the turnout with fine tolerances that need to be held absolutely rigidly. The rails can be quickly soldered to the copper cladding of the

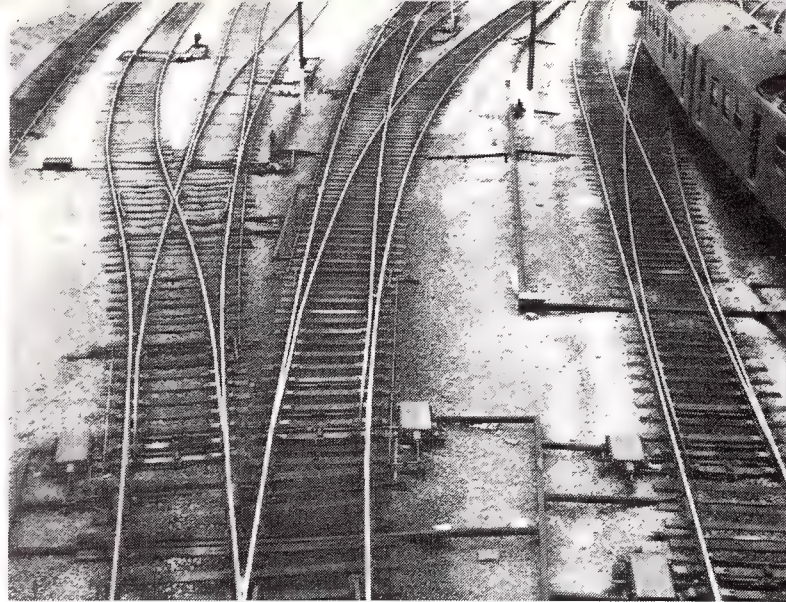
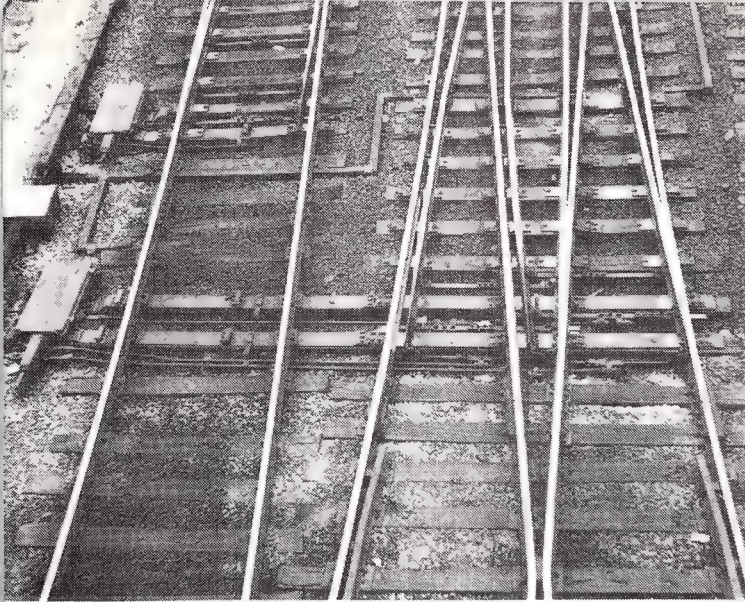
ANY COMMENTS?

Clive Huggan is keen to hear of suggestions, queries or criticism about the "TRACK" series of articles. Because he's the world's second-worst procrastinator where letter-writing is concerned, he is interested in receiving comments on cassette tape when some sort of reply or response is required. However, if no reply is needed, a letter or note would be welcome. All comment will be noted and incorporated in a latter article if appropriate.

Letters (or cassettes in Australia Post padded bags accompanied by return address and a stamp for return mail) should be addressed to:-

Clive Huggan
c/- SCR Publications,
P.O. Box 235,
MATRAVILLE. 2036.
NSW.

Clive indicates that he will normally be able to reply on tape within three weeks, depending on his commitments. He says "Feel free to be frank." So let him have it while he's willing!



Feast your eyes on this! Note check-rail and wing rail detail. (SAR Broad Gauge).

PCB, but if wooden sleepers were used at the crossing, the rails would have to be soldered before being placed into position, to avoid burning the wood. Wooden sleepers are used at the less critical parts of the turnout for improved appearance. They are added after all the rails are laid.

- Accurate tolerances are obtained at the crossing and points, using simple home-made gauges, a vernier caliper and automotive feeler gauges. Without gauges dimensions vary and reliability suffers; *this is very important.* (A description of the vernier caliper is in January/February 1978 issue by sheer coincidence.)
- The tolerances depend on the wheel standards used. These standards should be limited to one specification, or at the most two very similar specifications. I will be basing dimensions on the American NMRA standards, which are the same as those of the

Southern Cross Model Railway Association (SCMRA), and very similar to those of the British Railway Modelling Standards Bureau (BRMSB) and Australian Model Railway Association (AMRA). Although I use Code 55 rail (0.55"/1.40 mm high), the only difference between it and, say, Code 100 (as made by Peco, for example) is the height of the rail and the width of the rail-head. Although the Code 55 rail is smaller, *this does not mean finer standards than using Code 100 or any other size rail.*

Modellers using ot

Modellers using other standards (e.g., Rivarossi/Lima/N) should take their crossing and flangeway clearances (but nothing else) from turnouts of the same manufacturer, using a vernier caliper. This will be discussed in a later article.

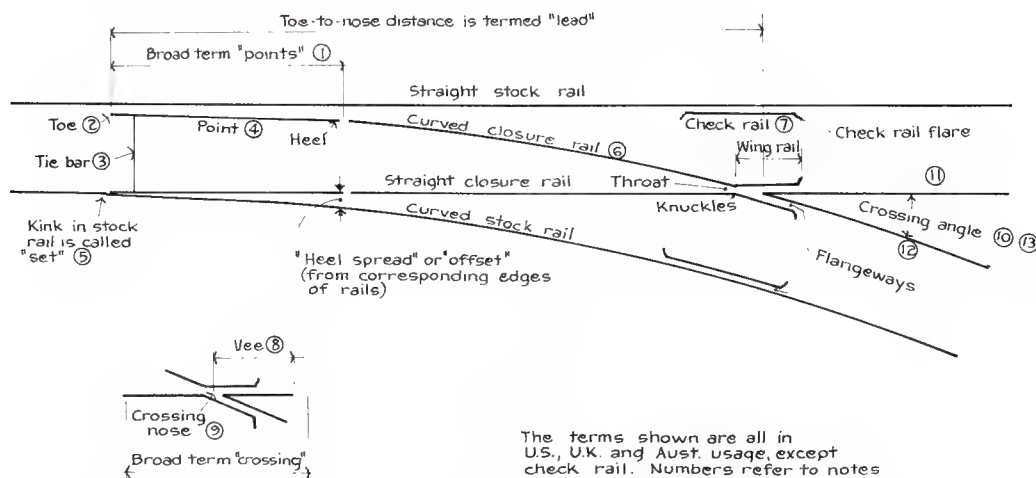
- Although construction will be aimed at achieving a high degree of reliability over a

very long period, it will be assumed that this turnout will not be subject to the rough handling of juvenile (over or under 21) model bashers. Sturdier options will come later. To be more specific, though operation under rigorous exhibition conditions would be no problem, this turnout is not built to resist indiscriminate use of, say, a screwdriver to prise a different clearance out of the points.

Turnouts and Terms

Now I've slipped in the terms 'crossing, points, flangeway', I should get things straight on terminology. In Australia and New Zealand the prototype railways have used terms inherited from the companies in which their senior engineers started their careers. (In the SAR, for instance, there is the perceptible early GWR influence in some areas, perhaps through Isom-bard Kingdom Brunel's being the Honorary

29 THE TURNOUT- MOST COMMON TERMS



The terms shown are all in U.S., U.K. and Aust. usage, except check rail. Numbers refer to notes

Key to Numbered Notes.

1. Alternative terms in US, UK is 'switches'. In the US, 'switch' is also a frequently-used term for turnout.
2. Alternatives are 'point of switch' (US), 'switch rail toe' (UK).
3. Occasionally 'switch rod' (US), 'tie rod' (US, UK, Aust.) or 'stretcher bar' (UK).
4. Occasionally 'switch point' (US), 'switch blade' (UK), 'switch rail' (UK), 'point blade' (Aust, UK, US), tongue rails' (UK).
5. Sometimes the stock-rail is actually bent outwards (very rarely in Aust) by 3/8 inch, as below, and is called a "joggle".



The 'set' is shaped as below (angle exaggerated).



6. Alternative US term is 'lead rails'.
7. US term is 'guard rail'.
8. A common term used only in the modelling fraternity is "frog". Related terms are 'point of frog' (9) and 'frog angle' (10).
11. UK term for this rail of vee is 'point rail'. In US, it's 'frog point rail' (and for 12).
12. UK term for this rail of vee is 'splice rail'.
13. Crossing angles are most frequently expressed as 'No. 4, No. 5½, No. 8 crossing' (or frog) — that is, "1 in 4" etc, meaning 1 unit of deflection for 4 units on the straight road.

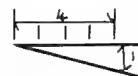
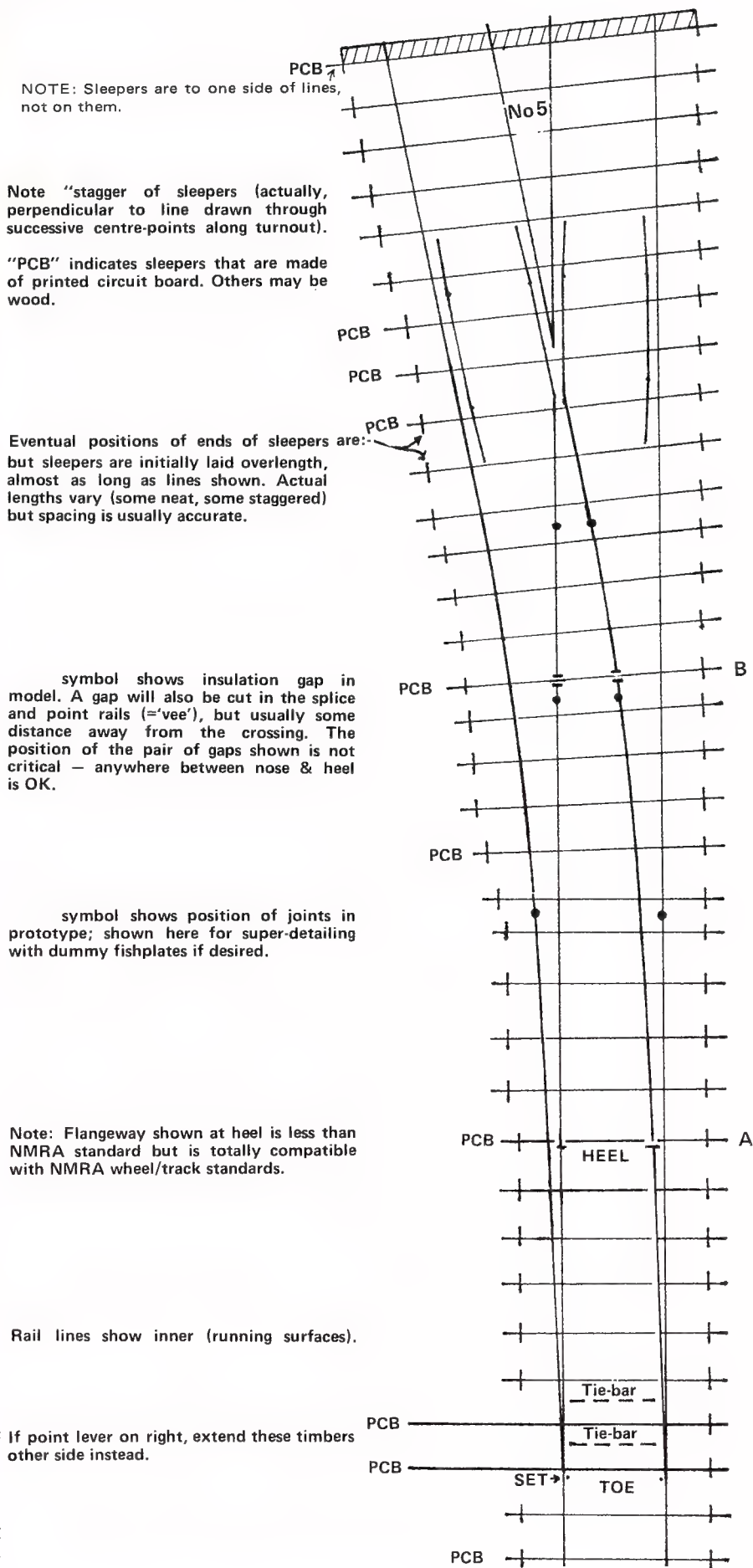


Fig. 30



SAR STANDARD GAUGE No. 5 TURNOUT: 1:87 SCALE

Drawn for AMRM by C.A. Huggan, Feb '78.

Based on data provided by SAR and Mr. K. Norgrove.

Chief Engineer; then, later, the stamp of the famed William A. Webb who came from the Missouri-Kansas-Texas. On the WAGR there seem to be many LMS-type influences; while the VR changed markedly after the Canadian Pacific's Thomas Tait became Commissioner.) What this boils down to is that, although standardisation is now increasing, Australian railway terms are too varied to follow any particular State's usage. What I've done is to draw up at Fig. 29 the most commonly heard correct terms, giving preference to alternatives that are the most widely known. Less preferred terms are in the notes. (I'd welcome criticism if anyone has other well-founded suggestions.) Incidentally, you're not alone when in confusion you have to look up Fig. 29 - just join the club!

The Template

The template at Fig. 30 is the one used for H0. For other scales appropriate dimensions can be obtained using any ruler and a calculator with a constant function; or a scale ruler; or squared paper. (H0 modellers could take photocopies to preserve the hallowed pages of AMRM.) The working copy of the template is taped under a sheet of thin perspex, glass (a cheap offcut from a glass merchant), or (not so good) taped onto a piece of smooth plywood and covered with greaseproof paper or thick polythene sheet. The template of Fig 30 will produce a turnout that looks like the one in Fig. 31.

Sleepers

In Fig. 30 the sleepers marked P are the ones that will be laid in PCB. You can buy sheets of PCB from electronics shops - a 300 mm square sheet, enough to make many turnouts, only costs about a dollar. 0.8mm/0.035" thickness is best. Woodgrain is scratched on before cutting. Strips are cut off 10" (H0 2.6 mm) wide with a cutting hook (or 'skrawker') made from a hacksaw blade ground up on a grinding wheel (see Fig. 32). The cutting hook takes about 10 minutes to make. The 'fence' ensures straight, accurate cutting. Just make a few strokes and snap the PCB off. The sleepers are cut about 6 mm over-length; the template shows the length to which they will be trimmed later. Each is glued which a dab of PVA adhesive (it can be soaked off later), or taped down, at the ends.

Woodgrain should be lightly scratched on (enough to show through track paint that will be applied later) before laying rails on the PCB. The PCB is fixed to the glass by a small dab of PVA (Aquadhere) adhesive, or taped at the ends. The PVA is eventually released by applying water when all the rails have been laid.

The Crossing Vee



The first rails to be laid are the crossing vee. By basing the position of all other rails on the vee and working outwards, it will be easy to position the other rails accurately. Alternatively, one stock rail can be used as a starting point, working to the vee and finishing with the other stock-rail. Most modellers work inwards from both stock-rails towards the vee - why, I don't know, as it can lead to problems because once you've laid the stock rails, the only way you can adjust any error is to move the crossing towards or away from the points, and that in turn requires the stock rails opposite the crossing to be relaid to a new angle and position, to match the angle of the crossing. (The straight stock-rail can be used as the base rail instead of the vee, building across to the vee then the curved stock rail, if preferred. Just avoid working in from the two stock-rails.)

The vee is filed from two pieces at least 3/4" long (120mm H0) as shown in Fig. 33. The advantages of this method are the point in extremely sharp - an important feature that prevents wheels dropping into the throat. Some modellers and most manufacturers fill the flangeway in at the throat, to the depth of the chosen wheel flanges, but it's hard to get the depth absolutely correct. Then, if the flangeway is too deep, the wheels drop anyway, and if it's too shallow wheels ride up at the throat, increasing the chance of stalling by

reducing electrical contact on live wheels and increasing the chance of derailling. Though the prototype flangeways are partly filled, that is only for structural strength and spacing. The flangeway blocks do not in any way come near the flanges. Moreover, at the throat there is none (See Fig. 37). If you want to duplicate the prototype, filling (with epoxy/Plastibond) well below flange depth is recommended.

To obtain the correct angle on the point rail and splice rail comprising the vee, fix a block as shown in Fig. 34 to a piece of Laminex or Formica inclined at half the angle of the vee in question to a finely-scribed line. The line is made clearer by marking with a thick felt tip pen and wiping the surplus stain off sideways with a meths-dampened rag. When the rails are placed against the blocks (upright or upside down), the angle being filed can easily be checked.

Soldering the vee is easy. On another piece of Laminex, or dural sheet, scribed at the required vee angle and with a hole at the point, a piece of scrap is used to hold the rails in place. Using ordinary soft solder (resin-core will do) and a soldering iron of 40 watts or more, the rails are soldered together (Fig. 35). The two rails are simply joined together; any surplus should only form a small filler.

Next, solder paint is applied all along the bottom of the vee. I use Fryolux solder paint, but a readily available alternative is 'Kemtex B916', \$2.40 for a 375 g tin from O.T. Lempriere in each capital city. Kemtex is more viscous than Fryolux. It can, however, be watered down (50-60% maximum) so that it can be applied through a hypodermic syringe. Otherwise it is smeared evenly on with a piece of rail. (As long as you don't look like a junkie, your friendly GP should be able to give you a syringe. Take a pair of pliers in case he/she prefers the needle point snapped off.)

The vee is placed carefully in position on the PCB sleepers over the template, and is soldered in place. Start furthest from the point of the vee (the nose), spotting the end of both rails. ('Spotting' is applying just enough heat to melt the smallest amount of solder

that will bond the joint. If the rail is in the wrong position, say through slipping, it can easily be unsoldered. When all is checked, the joint is reheated to completely fuse the joint.)

Apply heat to the rail, not the sleeper. At this stage you may wonder why the copper cladding is blistering, or the joint isn't holding. The aim is to apply heat between these two extremes. It's a good idea, if this is new to you, to solder a few pieces of scrap rail to PCB pieces, deliberately applying too much and too little heat to successive joints. Test the joints to destruction. Then try to make ten joints successfully. You'll soon get the 'hang' of it and it will become fun to do — and quick. But make sure you have practised enough joints to be sure of a firm job every time. The solder paint between the sleepers will be washed off later.

The Straight Closure Rail



The straight closure rail is next (yes, I always have to check Fig. 29 too). For a No. 5 turnout rail is cut a little longer than the eventual 41'6" (H0 145 mm). The wing rail end is bent (using two pliers) as shown in Fig. 36. A scribed line on laminate is helpful here, too, because it's essential to get the angles spot on. The bend at the throat need not be abrupt — a little roundness is an advantage, as it lessens the chance of long-wheelbase locomotives catching their wheels on the curved route.

The crossing shown in Fig. 37 is what we're aiming for, so the photo is worth studying now. The shape of the point rail and splice rail is different from that shown in Fig. 33 (I prefer to make both rails equal because the difference is only notice by the purist; it's very easy to get the angles wrong when the Fig. 37 shape is used, and running qualities must come first). The Fig. 33 method is used to produce the Fig. 37 shape, if you prefer the correct construction.

Place the straight closure rail in place on the sleepers against a straightedge such as a 150 mm steel rule, and move it towards the vee until a

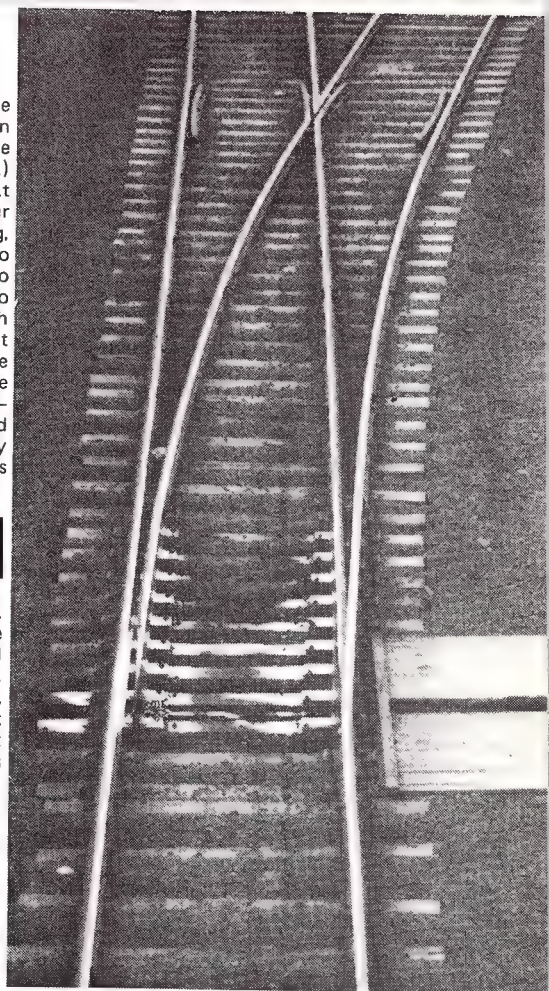
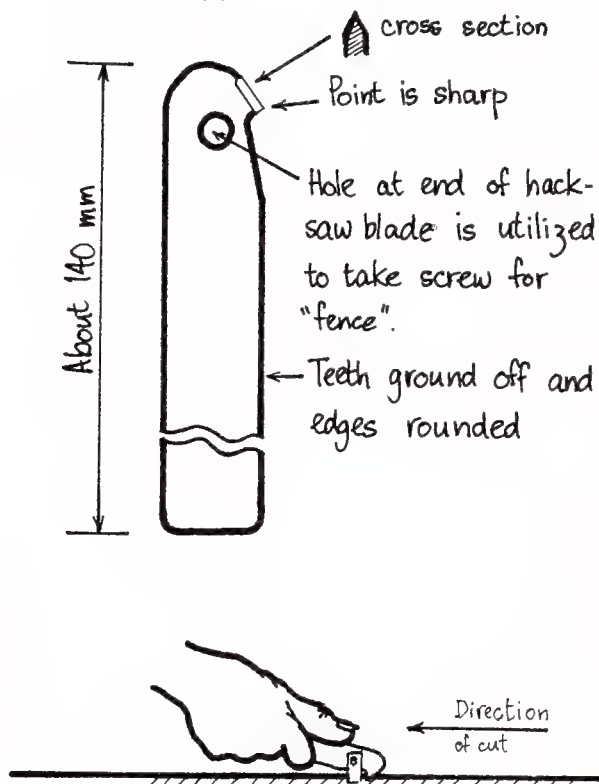


Fig. 31. Turnout as in template at Fig. 30 (NSWPTC). Note the straight route through crossing; sudden "set"; shape of curve; unusually neat sleeper ends; and grease in the area of points.

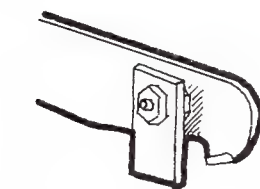
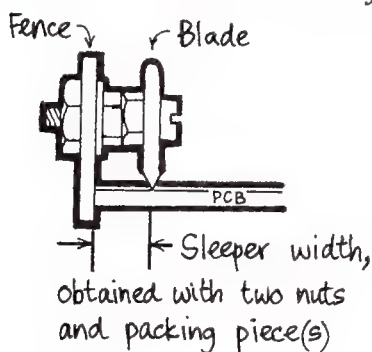
32 CUTTING HOOK - FOR CUTTING PCB SLEEPERS

A: THE BLADE



B: THE FENCE

(Version for right-handers)



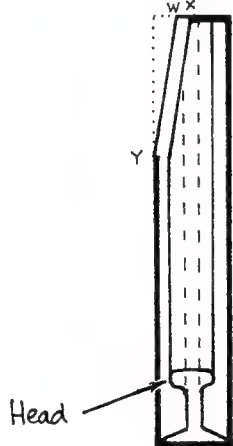
Nuts and fence locked with ACC('Zap')/Loctite.

33 FILING A SHARP VEE

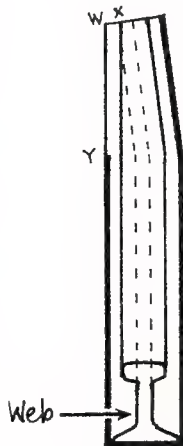
File base to here.
File head further
to here

Bend distinctly
at Y

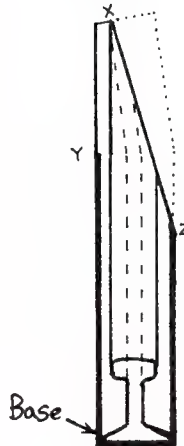
File to
sharp
point



A



B

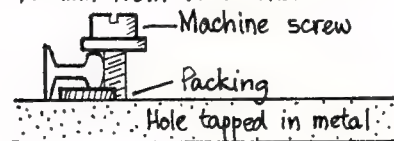


C

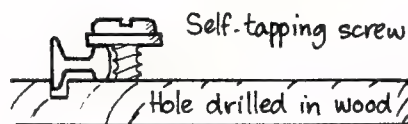


This unsupported rail-head would
have resulted at tip if rail had not
been bent at Y. Our tip looks like

GRIPPING RAIL FOR FILING -70 mm from filed end.



OR



flangeway of 1.35mm/0.053" is reached (maximum NMRA/SCMRA; AMRA max. is 1.4; BRMSB min. is 1.25 mm). (By the way, it isn't necessary to work to such fine tolerances as 0.01 mm — it's just that for tolerances expressed in mm and thous. (as in the original NMRA specifications) it's best to express them to 0.01 mm so that they agree completely. For 1.35 mm either 1.3 or 1.4 mm in a turnout would be quite suitable.)

Although a vernier caliper is suitable for measuring the flangeway automotive feeler gauges are better. They cost 75c usually, and measure most clearances up to 2.17 mm (metric sets) or 86½ thou. (Imperial). I use 'home-grown' feeler gauges — dural pieces that I've carefully filed to a thickness corresponding to the wing-rail flangeways. For the filing of the dural pieces a vernier caliper, as described in Issue 88 of AMRM, is definitely needed.

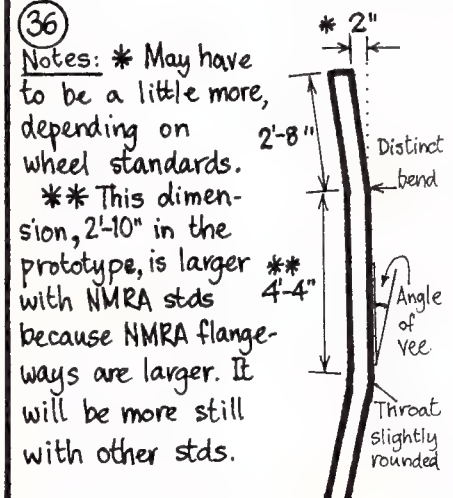
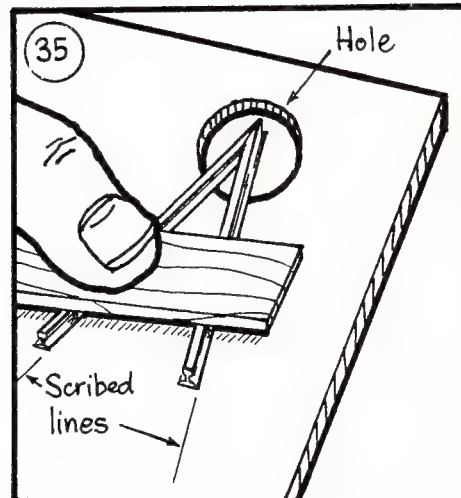
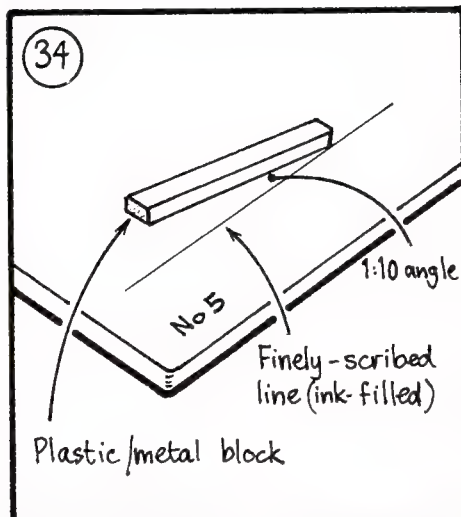
When the straight closure rail is held in position, scratch the rail 2.5mm (H0) half-way past sleeper A in Fig. 30, then cut it there so that it allows the rail joiner to pivot the points to fit between the sleepers. (If for any reason you have to fit the joiner over a sleeper, scribe lines on the sleeper, on each side of the rail, unsolder the sleeper, file a suitable channel and resolder.) In the turnout will be viewed from the right side when in place scribe a line on each sleeper to the left of this closure rail. Remove the rail and file gaps in the copper cladding to the left of the scribed lines. (If the turnout is going to be viewed from the left, gapping will be done instead to the right side of the curved closure rail.) next, carefully saw the excess off the heel end where the scratch was marked. Slightly round the rail-head and base. Then, with resin-core solder, 'tin' (i.e., apply a very thin film of solder to) the outer side of the web of the rail for about 5 mm, starting 3 mm from the heel (see Fig. 38). This will be where we'll solder electrical jumper wires later. The end 3 mm

is left free of solder so as not to interfere with pivoting. 'Lead' pencil graphite applied before soldering prevents unwanted spreading of the solder.

Check the rail for straightness, coat the underside with solder paint and reposition it. Soldering is easier if you have something that can grip the base of the rail on the side opposite the soldering iron. I use a dental 'sickle probe' (Fig. 39), because it's strong, and doesn't act as a heat sink that would spoil the soldering. They can be bought for \$3.50 cheaply from a dental supplier, but you may find your friendly dentist has a drawer full that he/she just hasn't had the heart to throw out after buying new sets with the co-operation of the tax man. Strike up a conversation just before he rams your mouth full of cotton wads and gloats over you with a needle in hand. A comment like, 'Er, gee, one of those evil-looking probes is just what I should use my model railway truck-making' will probably set him rummaging around, and if you can put up with the tension of delaying his mutilations, you may be offered tools you never knew existed! If you haven't been aware already, you'll find dentists have a lot in common with small-scale modellers, largely because of a similar scale of workmanship and skill of hand.

Make a final check to ensure alignment of the closure rail with the vee (nothing beats the Mark I Human Eyeball Computer) and solder up. Beaut fun! Check alignment as you go.

The Straight Stock Rail



Next lay the straight stock rail, using a track gauge. The Tenshodo gauge is cheap (50c) and effective — modified for smaller rail sizes as shown in Fig. 40. They are fairly widely available; I know the Model Dockyard has them. I use a roller gauge for preference; details will be given in a later article. After gapping the sleepers (omitted if you're gapping the curved closure rail), solder the rail in place, sighting along it regularly. Check for accurate gauging — don't be afraid of re-soldering if it's not spot on. 'Tin' the outside of the web near the heel, as before, ready for the jumper wires.

Now's a good time to have a play with a bogie rolled from end to end by gravity, leaning the turnout over to each side. When leant towards the closure rail side, the wheels will unerringly go the wrong way up the vee. It's a fault of coarser-than-prototype standards, and shows how necessary check rails are — and, in turn, how important it will be to have the check rails in the exact position.

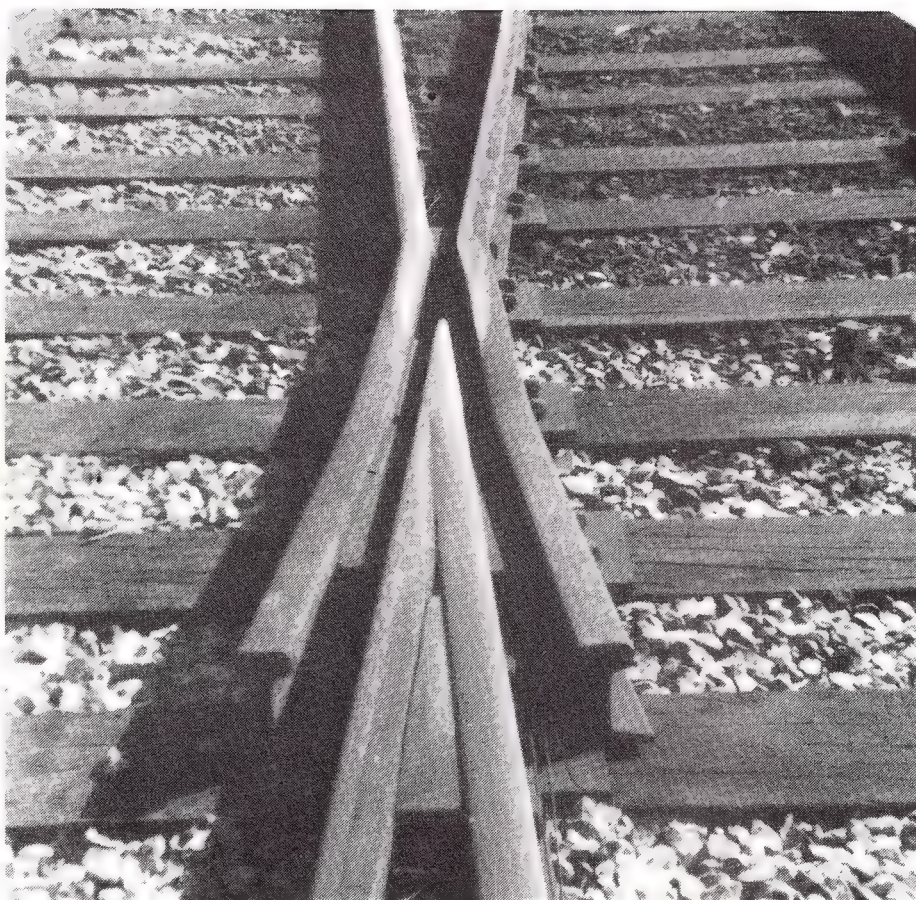
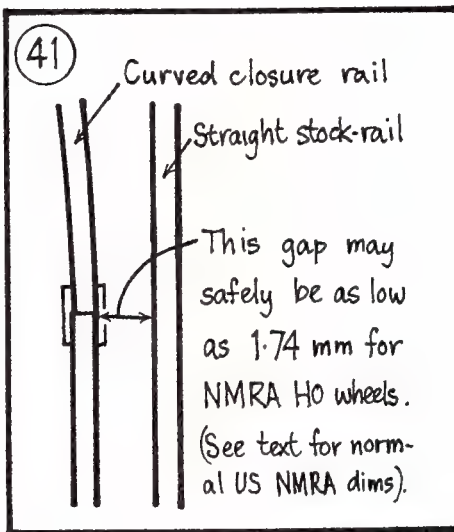
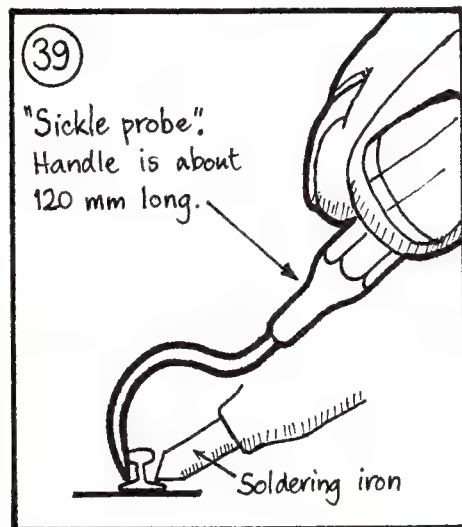
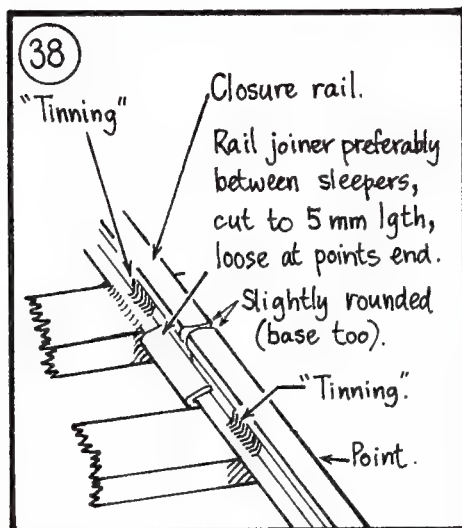


Fig. 37. Crossing (SAR). Note the different rates of wear for the two routes, the shape of the point rail and splice rail and that on this turnout sleeper plates have been used.



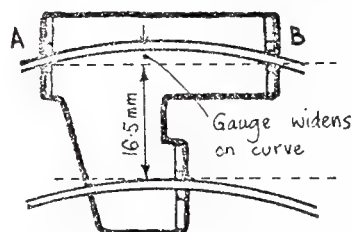
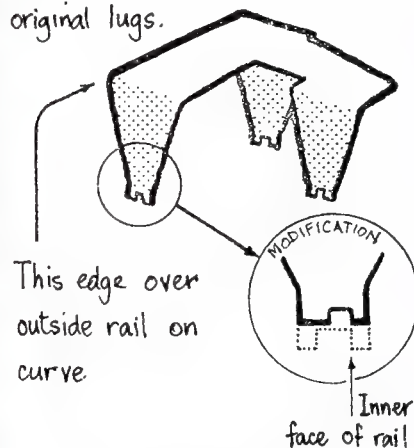
The Curved Closure Rail

The next step is to form the wing rail and throat angle of the curved closure rail. In general, the steps for the straight closure rail are repeated. If you're using Code 70/1.8 mm rail or smaller, the curve will form naturally as you wolder up following the line on the template. Larger rails need to be preformed, which is a nuisance to do well. Note that on this turnout the curved closure rail becomes straight about 8 ft. before crossing the nose.

Before soldering the heel end of the closure rail it should be mentioned that the template provides for a 1.74 mm 'flangeway' at the heel (see Fig. 41). NMRA standards (for US turnouts, differently shaped from Australian turnouts) call for 3.18 mm minus the rail-head width for points of the same length as this turnout's, producing point 'flangeways' that are unnecessarily large. I solder up towards the heel, holding the 1.74 mm gap accurately with a piece of dural spacer spec-

40 TENSHODO GAUGE

For rails smaller than 2.5mm/Code 100, each leg is modified by filing the slot deeper but narrower, then filing off original lugs.



Unlike most gauges, lugs A&B on the Tenshodo gauge are the correct distance apart for proper, automatic gauge widening.

ially filed for the job. Vernier calipers also do the job well, too. Make sure that the closure rail follows the template curve very accurately. If the turnout is to be viewed from the left and you didn't therefore do any gapping earlier, don't forget to gap sleepers on the right side of the closure rail.

To be concluded next issue.

EXHIBITIONS

HORNSBY — N.S.W. June 3rd, 4th and 5th 1978 at the Asquith Boys High School. Open Sat 0900 — 2000, Sun 1000 — 1800, Mon 1000 — 1700. Organised by the Hornsby and District Model Engineers Co-Op.

RAMSGATE — N.S.W. June 17th at the Ramsgate Uniting Church Hall, Rocky Point Rd., Ramsgate. Art display and model railways, featuring Menangle. Open 0930 to 1800. Organised by the Ramsgate Uniting Church.

KEILOR — Victoria. June 24th and 25th at Kellor Primary School, Kennedy Street, Keilor. Open 1200 to 1800 both days. Admission 60/30. Organised by the Mont Valley Modelling Group.

CANBERRA — A.C.T. August 5th, 6th 1978 at the Malkara School, Wisdom St., Garran. Open 1100 to 1700 both days. Organised by the Canberra Model Railway Club.

WOLLONGONG — N.S.W. August 26 and 27 1978 at the Keira Boys High Auditorium and grounds, Lysaght St, Wollongong 2500. Model railway and traction on display. Open Sat 1000 — 2100, Sun 1000 — 1700. Admission 50/20. Organised by the combined Wollongong model railway clubs.

N.S.W. WAGON COUNTDOWN — 1

In 1955, the N.S.W.G.R. had 2,203 'U' type open/hopper discharge wagons available for service. By 1977, only 1 vehicle of this type existed on the N.S.W.P.T.C. register.

Paul Rogers

VICTORIAN RAILWAYS 'P' CLASS (EXPLOSIVE) VANS



P8 at Dry Creek (S.A.) No. 2 side; handbrake lever is on far side. Photo by Phil Curnow.



P14, No. 1 end. This is a first series van.



P23, No. 1 side. Note high location of handbrake lever centre.



Third series P van, No. 1 side. Handbrake and bracing are quite different to that on P23.

The P vans are all 4-wheelers used for carriage of certain types of explosives materials and detonators. (Liquid nitroglycerine and similar highly dangerous types are not carried by the V.R.) Much of their loading is done from the ICI explosives plant at Deer Park, a western suburb about 12 miles from Melbourne. Typical destinations include Tallangatta for the Forestry Commission; Broadford, for quarries; Orbost, and Wodonga.

Special Train Arrangements:

The V.R. 'General Appendix' and Traffic Branch Instructions specify special placing of P's in train consists. At present, these rules forbid more than 12 loaded P vans in one train. The P's must be separated by at least 3 'safety' wagons (those empty or with 'safe' non-inflammable loads) from each other and from the loco and van. Also, loose shunting is absolutely forbidden. Occasional violations of rules occur, such as the time a AMRM contributor was driving a train to Orbost and, when halfway there, discovered that the first wagon was loaded P van: what an incentive to careful driving!

The Three Main Types:

P1 to 25, built in 1953-4. These have flat steel diagonal sidebracing, and the tapered end braces are like those on wood-sheathed T Vans.

P26 to 45, built in 1958-9. These have angle iron diagonal bracing, and non tapered end braces. The underframes are identical to those on P1-25.

P46 to 51, built in the early 1960's. These have the same body style as the second series, P26-45. NOTE: the handbrake arrangement is similar to that on the first group. Therefore, if you build a 'third series' van take your handbrake data from the 'first series' drawing.

Color Scheme:

All groups have the same color scheme. Body and roof: Bright red.

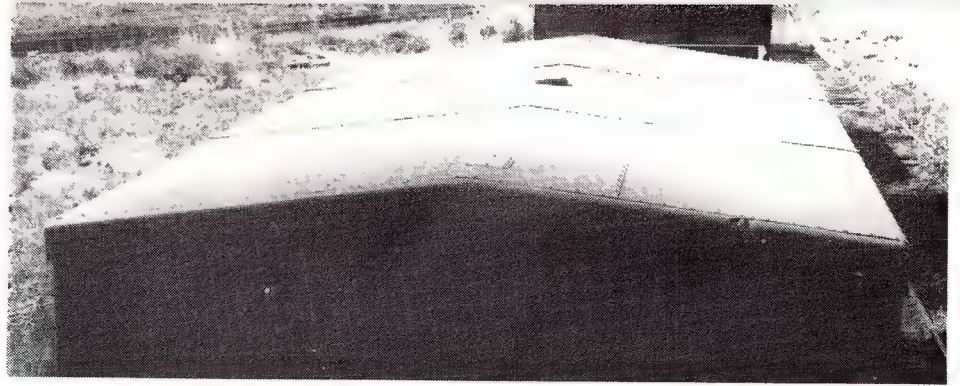
Underframe: Black

Interior: Grey

Lettering: The word 'EXPLOSIVES' is displayed prominently on the sides and ends, using black letters on a yellow background. Some vehicles have a black border around the yellow.

Miscellaneous Detail:

The ventilators originally fitted in the roof have been removed and replaced with flat plates. However, the roof rungs have not all



View along the roof of P13. There are at least 3 variations in P roof details.

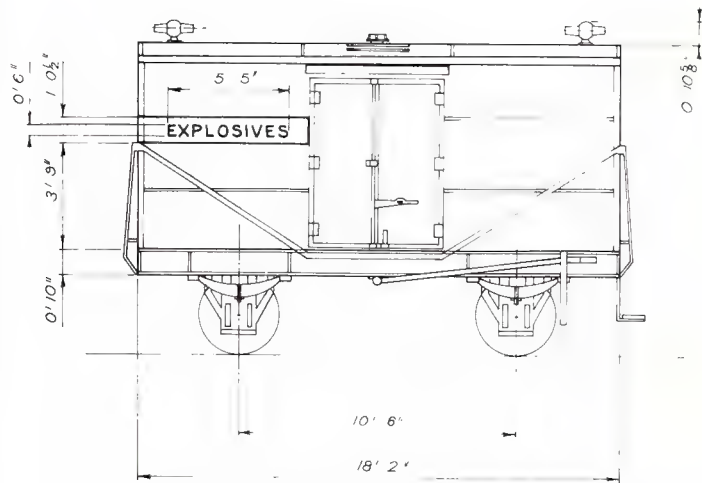
P30, No. 2 end. This is a second series van.

been removed.

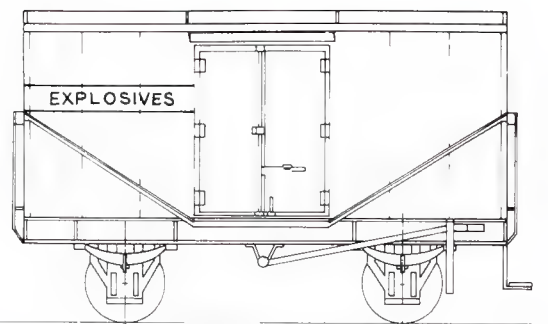
(Compiled by Ian Weickhardt on information supplied by Peter Vincent. Photos by Peter Vincent).



VR 'P' and SAR 'EE' coupled together.

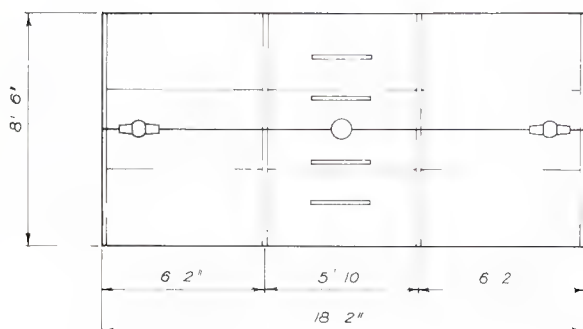


FIRST SERIES



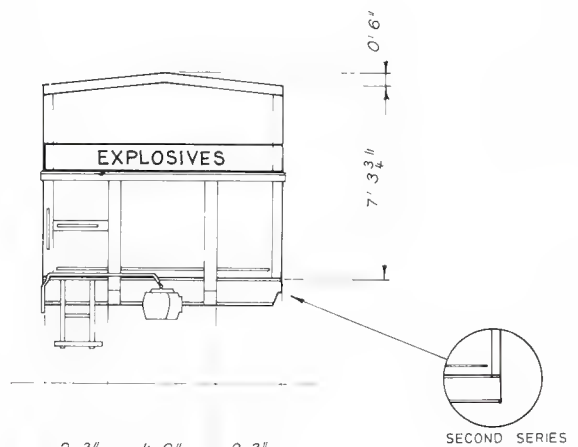
SECOND SERIES

SHOWING POST 1968 ROOF



ROOF PLAN

NOTE ROOF VENTILATORS REMOVED FROM WAGONS APPROX 1968. VENT HOLES COVERED WITH PLATES



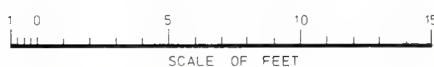
VICRAIL 'P' CLASS
POWDER WAGON
10' 6" WHEELBASE

Information supplied by Peter Vincent

Plan prepared from VR plan, photographs and dimensions of P13

Drawn R. Wigglesworth

October 76



CASEY'S BLACKSMITH SHOP

article by Peter Kelly
photography Geoff Doolan

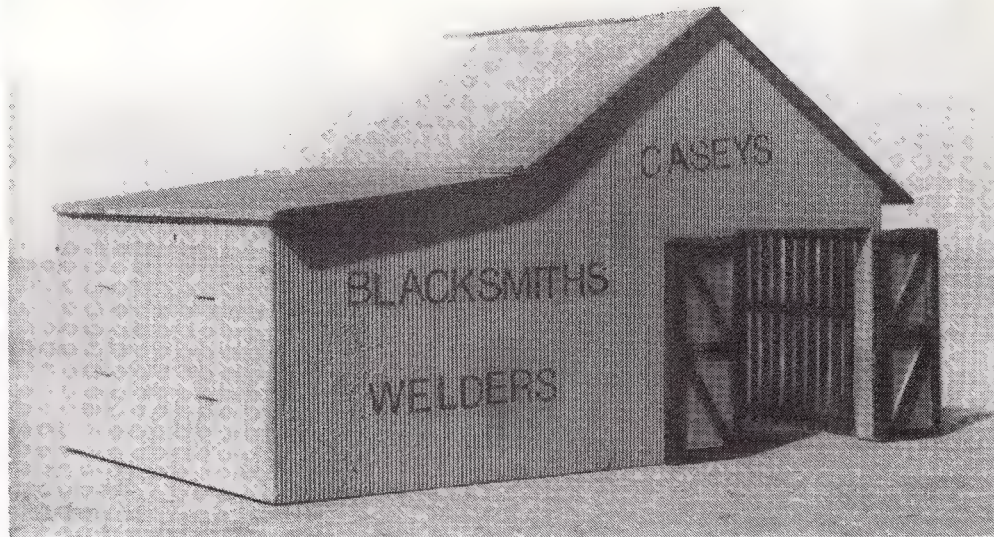
The original building was owned by my father-in-law, Jack Casey, in Atherton, Queensland in 1940.

The building was constructed of corrugated iron sheeting, with the front and rear doors a timber frame covered with iron. The closed side of the building had two windows which were simply the iron cut and pivoted. The open side of wooden slats was and still is the method used on blacksmiths' and welders' shops to allow both air and light in.

This is a relatively simple building to model since it is only a shell made from scale corrugated iron and scale stripwood for the slatted side.

The scale iron in this case is grooved timber which was cut to size for the front and rear, with the space cut out for the doors. As the rear doors are closed, the timber was cut a fraction smaller than the opening and held in place by two pieces of timber glued horizontally on the inside of the walls and doors. The closed side windows were simply grooved with a craft knife to appear as the windows. The front, rear and closed side walls were then glued together.

The open side was made from scale stripwood the equivalent of 150mm x 25mm timber. The three horizontal boards were pinned down and the first upright was glued to them. The next upright was spaced by placing a section of stripwood on its edge between the uprights. This gives the equal spacing required between the 25 uprights, as seen in the photo. Three posts (305mm x 305mm) were then glued in the upright position on the reverse side of the horizontal boards.



The slatted side is 3965mm from the top of the uprights to the ground. This allows 305mm of open space between the uprights and the roof. This side was then glued into position.

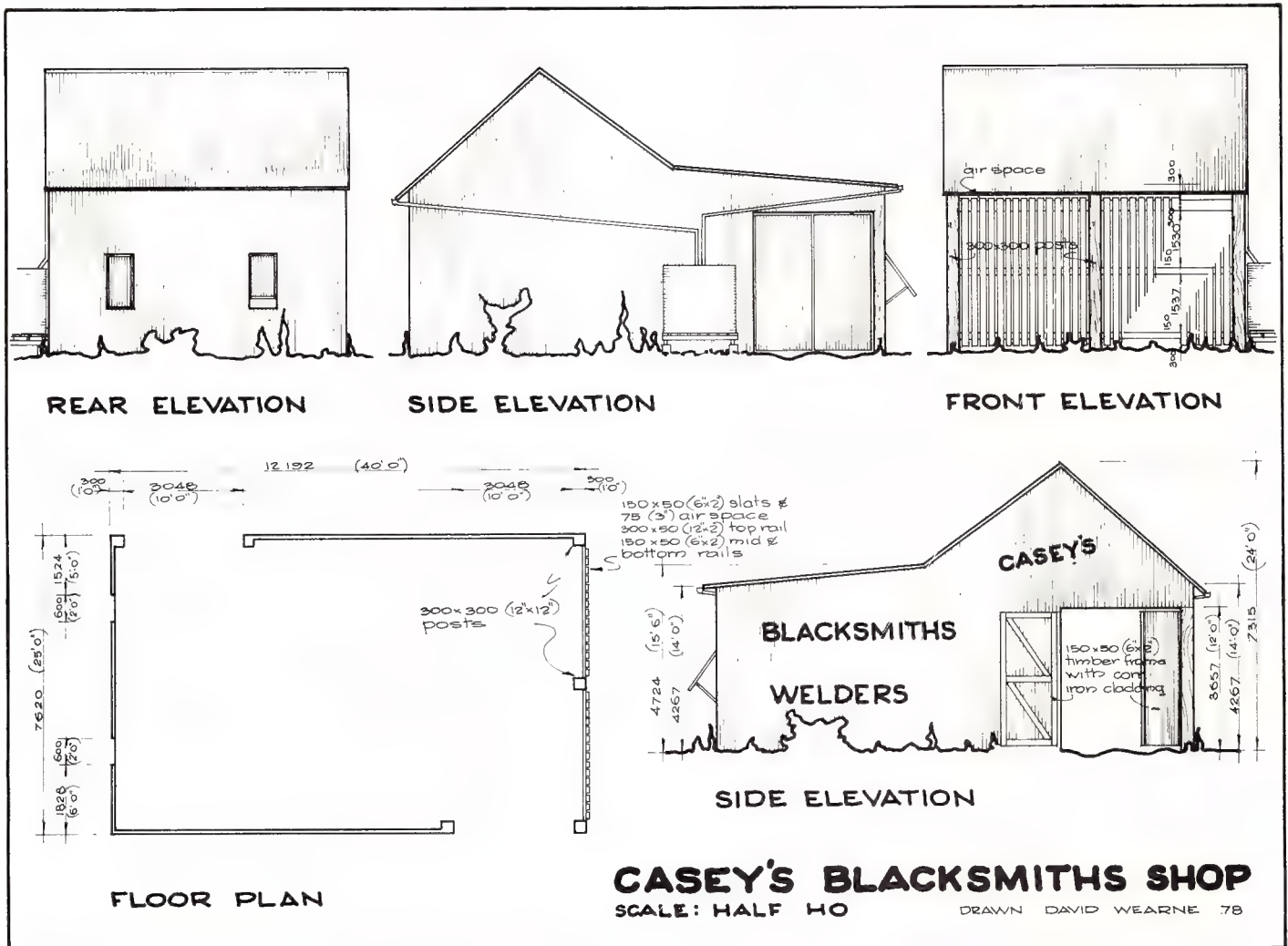
The roof has an overlap of 305mm all round. This is used instead of gutters and downpipes which cannot cope with tropical rainstorms. The roof was cut to size and glued on to the walls. I glued a piece of stripwood along the join between the hip and the sloping section of the roof to hide the join. Another piece of stripwood was used at the apex of the hip to give the roof sections something to be

glued to.

Lastly the doors were added. The frames were constructed from the stripwood and then covered with the iron and then glued in the open position.

The model was then painted a light grey (thinned with turps), and lightened by white to give various shades of grey. The door frames and slatted wall were painted matt black. "LETRASET" was used for the wording and pieces picked off to give a weathered appearance. The "LETRASET" size was chosen to make lettering approximately 458mm high.

NOTE: All sizes quoted are from Prototype.



LAYOUT DESIGN — Provide for Operation

As model railways are small reproductions of full size trains, why not refer to railway operations when designing a layout. Details compiled by Bob Gallagher.

Before spending excessive time drawing diagrams in the process of layout design, first list your operational requirements so that they can be incorporated into the layout. Whether the system is to be mainline continuous or branchline point to point, or mainline point to point, the overall need is to provide for operational movements. Of course to provide for the movements it is necessary that you have a little knowledge of correct procedures and there is no better way of learning this than from watching the prototype. The old adage "there is a prototype for everything" is just not true, for many modellers seem to have weird ideas as to how railways are run. This is not to say that

these modellers do not have the right to operate (play) as they wish; however there is very little that can beat the complications of some railway operations, and these complications, when applied to the model, make operation all the more interesting.

The excuse that many modellers do not have the time or transport to check railway operation first hand does not hold water for there are books available that cover virtually every railway system in the world and for Australian prototype enthusiasts there are many books published by historical and preservation organisations that cover the subject. It is, however, very interesting to see the railway

operation first hand and this can be done quite easily, as long as you do not trespass onto Railway property.

Despite the availability of books and the opportunity of first hand observation it is rarely possible to collect sufficient, relevant, data for model operation ideas in one specific area and so, for the readers benefit, some 1977 observations are presented.

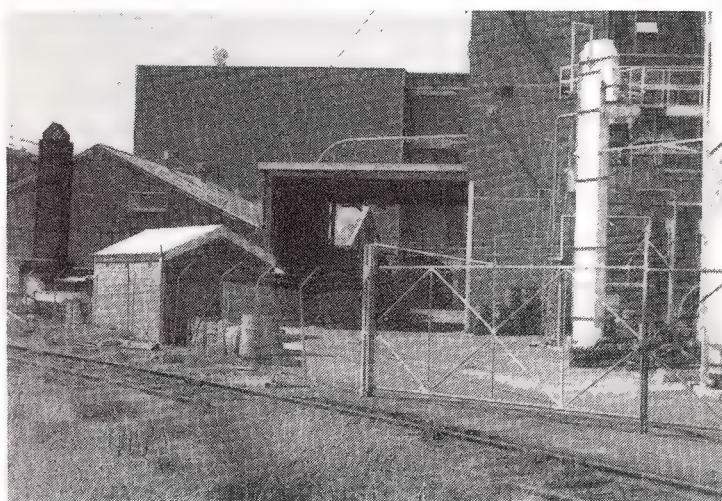
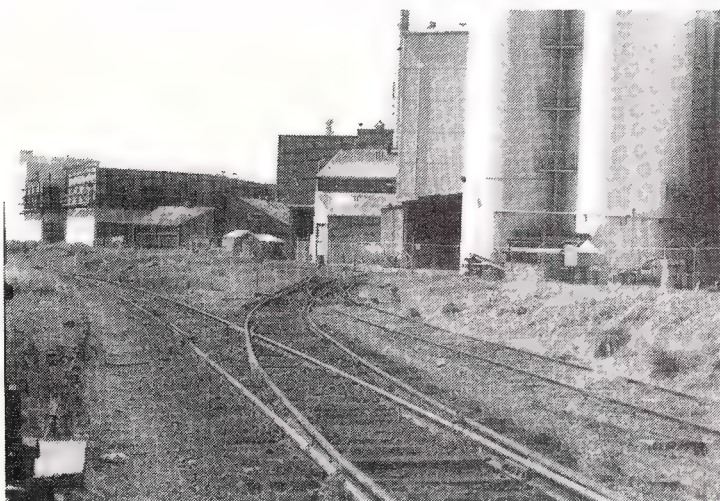
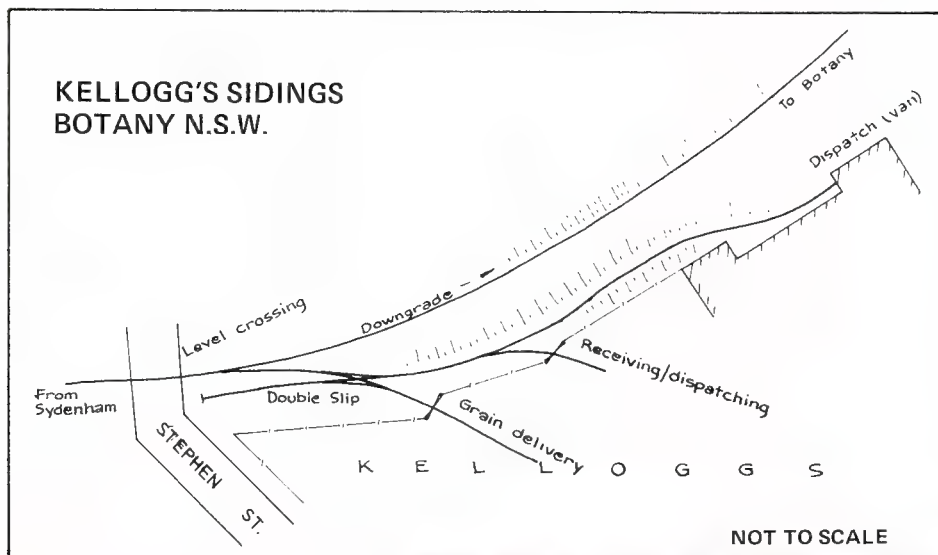
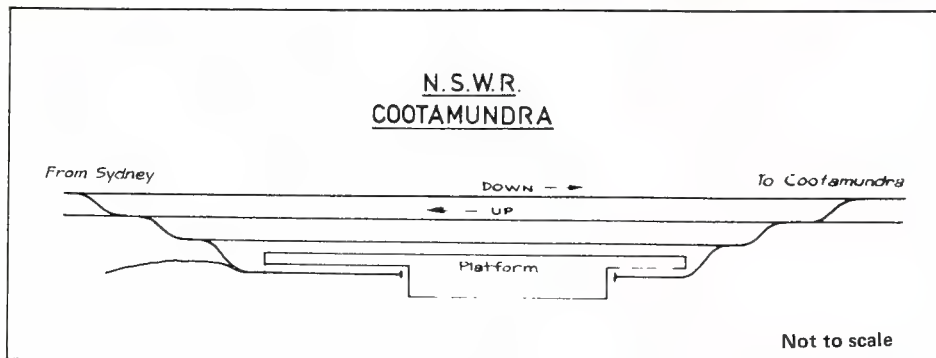
Passenger Traffic.

Although the passenger traffic on the railways is falling in demand, the current (1977) operation is quite interesting.

The movement at Cootamundra (NSW) is heavy for it is a junction on the main south line and is a point where branch trains join with main trains (Riverina Express, Daylight Express and South Mail). An example is the evening 'Up' South Mail, which is met at Cootamundra by railmotors from Tumut and Lake Cargelligo, the mail not departing until the arrival of both connections. The station has the facilities for two railmotors, there being a north and south dock. The Tumut connection uses the main platform, for it is scheduled for early arrival, but in cases of lateness the south dock is used. The north dock, being rather lengthy, holds the parcel/mail van (MHO) and the Lake Cargelligo diesel or railmotor. This train is scheduled to arrive after the train loco, off the mail, has cut off, run forward, picked up the MHO in the dock and placed it on the front of the mail train. From the rear the mail train consist was KP-LHO-MHO-FS-MCE-TAM-MHO (Cootamundra addition) — 44 class. The arrival of the Lake Cargelligo rail motor allowed passengers to transfer, parcels being placed in the rear MHO and mail into the KP. The KP is a travelling Post Office or letter sorting van.

To facilitate the connections by branch trains with the main, and the storage of vans for loading and unloading, the station and the trackage is arranged for minimum movement and blockage of the main line. Diagram 1 illustrates the track layout in the station area, the most noted aspect being that the platform road is independent from the main line.

The railmotor operation to Tumut is a twice daily service. The first journey to Tumut connects off the down mail and departs Cootamundra at 0700 hours, if the 'Down' mail is on time. The tabled arrival time at Tumut is 09.01 hours with departure for the return journey at 0915. In fourteen minutes the parcel traffic has to be unloaded and the vehicle made ready to depart. Arrival at Cootamundra is tabled for 1115 hours, thirteen minutes before the arrival of the 'Up' Riverina Express. Now if the mail is late the railmotor to Tumut is late and unless



The photographs of the KELLOGG'S (Botany) siding along with the diagram show a small industrial complex. Note the double slip turnout and the three loading/unloading bays. Wagons seen on the premises include WH/WHX/FWH/RU and S wagons (inwards), while the final products depart in LLV/GLV/JLX vans.



Main grain delivery bay at Kelloggs.



Hardys Wines have a single siding, these days unused.



The EMAIL warehouse at East Botany is a basic Industrial structure.



The ramp at Botany yard where sand is tipped from road trucks into open 'S' wagons.

the time can be made up within the twenty seven minutes of turn around time the express, which has to wait for the Tumut connection, would in turn be late. (This aspect can be put into a timetable and gives definite reason for model train lateness.) The railmotor's next journey to Tumut leaves after the departure of the down Riverina Express. Upon arrival at Tumut the railmotor is stabled (on the platform road) for three hours and five minutes, in which time the crew adjourn to the barracks for a meal. The evening railmotor departs Tumut at 1920 arriving Cootamundra at 2147, thirty eight minutes ahead of the up South Mail.

After discharging the parcels, mail and passengers the railmotor is moved to the service area where it is fueled, sanded, watered (at the one open service stand) and then stabled in the running shed, or an adjacent road, all ready for action the next morning. The whole service procedure takes about twenty minutes which, incidentally, in the case of Cootamundra, takes place at the normal diesel locomotive service stand.

Another example of mail trains is on a branch line. The Forbes section of the Western mail is loco hauled consisting usually of a composite coach (MCS) and a van (LHO). This section of the mail separates from the Dubbo section at Orange and conveys the Forbes/

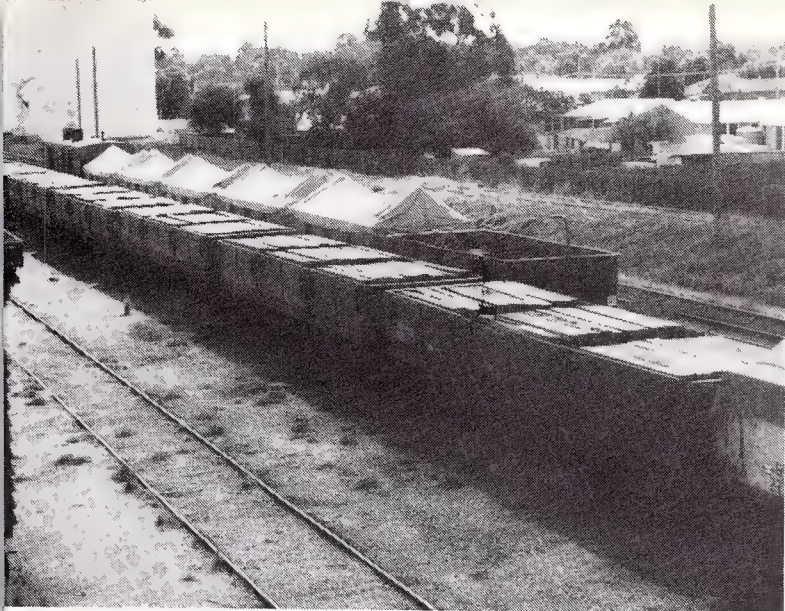


The Shepparton container crane is positioned over a single track spur adjacent to Shepparton station.



Oil unloading pipes at Queanbeyan, N.S.W.

All photographs by Bob Gallagher.



The sleeper industry at Echuca used a single spur track, where the sleepers are loaded into open wagons (both four-wheeled and bogie) by an elevator, which can be seen in the photographs. The wagons are then marshalled along with other vehicles for the trip southward.

Parkes section, the Parkes section (a sleeper) being left behind at Parkes. The return journey is the opposite, the loco, coach and van leaving Forbes, picking up the sleeper at Parkes and then meeting the Dubbo section at Orange. (The Western Mail, however, is a complicated story and will be related at a later date.) The one noted aspect of the consist of the train is that it is marshalled so that the sleeper can be easily cut off or added back on.

Operation in Victoria differs a little from New South Wales, although the practise is similar. The evening train from Melbourne to Cobden consists of three passenger cars and three vans. At Shepparton the last van is cut off; however it is not simply left behind. After the arrival of the train, hauled by a T class, the yard shunter, a Y class, moves up to the rear of the train and couples on — there now being a loco at either end. The van is uncoupled and the yard shunter hauls the van clear of the train which then departs, the van is then re-sited in front of the parcels office. (This would be accomplished on a layout by having the platform road in two electrical blocks.)

Another interesting train is the school special in the Nambour (Queensland) area. The three side entry coaches are hauled by a 1720 class loco and the train is stabled overnight at a waystation, the loco being used for pick-up work back to its depot.

Adapting some, or any, of these movements to a layout requires some forward planning in layout design for docks, run-around loops and isolation sections are necessary. It would seem a good idea to allow for sections of the yard to be individually blocked, even to the point of having the station road in two separate electrical blocks, thus allowing two locomotives to be on the same track, e.g. Shepparton.

Goods Traffic.

The first priority of goods traffic is that there must be a demand for the goods, i.e. trains do not haul wagons just for the fun of it. Each and every wagon must have a destination and a purpose. Therefore, a layout should be designed so that the yards have facilities for the expected traffic, i.e. cattle/sheep wagons need a stock race (even if it is at an abattoir); covered grain wagons need either elevated storage bins for loading or hoppers/elevators for bottom discharge unloading. A loading bank is always of assistance as is a section of track where the road is adjacent to allow direct loading/unloading between road and rail vehicles.

Oil unloading facilities are very simple to build and are to be found at most sizeable railway installations. The lineside warehouse, with open/covered dock, is an easy method of providing facilities for many products both primary and secondary. The railway goods shed is a must for nearly every station or rail area has one, usually of some distinct styling. The emphasis is to provide facilities so that wagons can be placed or shunted into position. This gives each wagon a destination and provid-



The container wagon is on a single siding at a Shepparton cannery. The containers are so arranged with doors inward to allow loading from the centre of the wagon. Needless to say the wagon being used must have a solid deck.

es an operational exercise for the operator.

Examples on the prototype are interesting and numerous. A simple earth ramp at Botany (NSW) allows for sand loading into S (open) wagons while the open area, accessible to road traffic, allows for the unloading of goods including salt from SAR LX/ANR GOX wagons. Kellogg's (breakfast cereal manufacturers) has access for bottom discharge grain wagons and a simple, but large, warehouse has access for covered wagons which convey appliances from the Email factory in Orange to Botany.

Fruit trains (louvre vans) are usually loaded direct from road truck while the sleeper industry loads from the ground adjacent to a siding. Containers need not leave the wagon at all for at Shepparton and Echuca the containers, two to a wagon, with end doors facing inward, are loaded while still on the wagon. Shepparton, of course, loads tinned fruit and jam while rice is loaded at Echuca. Container operation can be facilitated with forklifts or small container cranes, as at Shepparton.

Lastly, as an excuse for some slapdash running, all wagons must eventually be back-loaded to a central area or where a new load can be assigned. If, after arrival and unloading at its destination, there is no load for the wagon it is returned empty. There is also a possibility that the wagon may have to be returned (empty) to wagon workshops for repair.

These examples (and photos) are just a few of the many money-making facilities connected with the railways. As indicated earlier, the easy and interesting method of research into the

industries is first hand. Personally view the industry and then adapt it to the layout. When a layout is designed and built with some of the facilities being provided full operation is possible, as well as the card timetable operation described in the Jan/Feb 1977 issue of AMRM.

This article is a forerunner of others that will fully describe the details of specific railway operations that lend themselves to model operation. Both passenger and goods traffic will be covered and readers are encouraged to contribute to the non-continuous series.

Acknowledgements to Graham Ahearn, Stuart Livesey and Ian Thorpe for their assistance. All prototype operation was observed in 1977. Photographs by the author.

TRADE PRACTICES ACT 1974

The above act is now in force and contains strict regulations on advertising.

It is not possible for this company to ensure that advertisements which are published in this magazine comply with the Act and the responsibility must therefore be on the person, company or advertising agency submitting the advertisement for publication.

In case of doubt consult your lawyer.

S.C.R. PUBLICATIONS

HORSE BOXES OF S.A.R. PART 1.

by Phil Curnow

Several years ago I bought a kit of a KKG class horsebox and wanted more info about them so I asked Bob Gallagher for help and, as so often happens scored a question in reply. Somebody in NSW would do the KKG if I would do the SAR horseboxes. At the time I only knew of two types so I accepted the challenge. The project rapidly expanded to cover BH class with clerestory roof (built 1910-1922) BH with round roof (built 1935) railcar trailer 210 (built 1929) and the FH class four wheelers which were built 1860 to 1902 and then on the narrow gauge I found NH which is similar to the clerestory BH, OJ which was similar to the FH, J class (built 1880) and the HB (built in 1938). Dean Jackson suggested I should include the horsebox operated by the Municipal Tramways Trust, then, as if that was not enough Bob Yule found a reference to a Commonwealth Railways bogie van that could be converted to carry horses. My only consolation is that when Ross Hurley offered to do some horsebox plans he fell into the same trap as I did. The irony of all this is that Bob Yule also found an ancient issue of Hobbies Illustrated which had everything I needed to know about KKGs and included a plan by Bob Harvey.

Locating photos was not easy as all except the HB have been demolished. Railfans in the 'glory days' appear to have photographed the engine or the complete train and rarely aimed at individual vehicles. Not much different from today is it? The SAR line diagrams for the fourwheelers and the clerestory roofed types do not include end views so this proved a problem. Chassis diagrams and photos were used to reconstruct the ends on most but the 'J' is still a guessing game.

As well as horse traffic to racecourses, shows and stud breeders the horse boxes have also carried circus animals on several visits by Wirths Circus. On occasions bogie horseboxes were used in place of brakevans although this had to be authorised by the Superintendent. In recent years Baggage Centenary coaches were used during brakevan shortages. Road transport replaced the rail horsebox traffic and nowadays air transport is replacing road transport over longer distances. As an indication of how quickly rail traffic was replaced let us compare the number of horseboxes in 1950, 1960 and 1970.

In 1950 there were 11 broadgauge and 20 narrow gauge horseboxes. Adelaide B.G. had 11; BH865, 877, 4060, 4061, 4329, 4330, 4331, (clerestory). BH 4900, 4901, 4902, 4903 (round roof) and trailer 210. Peterborough N.G. had 11; J526, 1273, 1490, 1493, 1494, 1508, 1530, 2544. OJ3058 (all fourwheelers) bogie NH 5074, 5075. South East N.G. had 8; HB 7500, 7501, 7502 bogie. OJ 1269, 1270, 1277, 1303, 1496 (fourwheelers). Port Lincoln N.G. had 1; OJ 1268 (fourwheelers).

By 1960 nearly all of the four wheelers had gone and there were only five broadgauge horseboxes and six on the narrowgauge. By 1970 they were all withdrawn although the three HB class remained as narrowgauge accident vans.

On two occasions in recent years the ARHS has combined with a Hunt Club to run a steam hauled Hunt Special. With no broadgauge horseboxes remaining one trip used a bogie cattle van suitably cleaned but the horse owners weren't really impressed. On the second trip a bogie horsebox FP7 was hired from the VR but unfortunately the expenses involved proved very high and this interesting tour was not repeated until May 21, 1977. This trip will be described later in this series.

The SAR General Appendix or rule book contained many references to the working of horseboxes and some of the general regulations will be mentioned here whilst specific references will be mentioned for the particular type of horseboxes.

The partitions in horseboxes had to be securely fastened before the outside doors



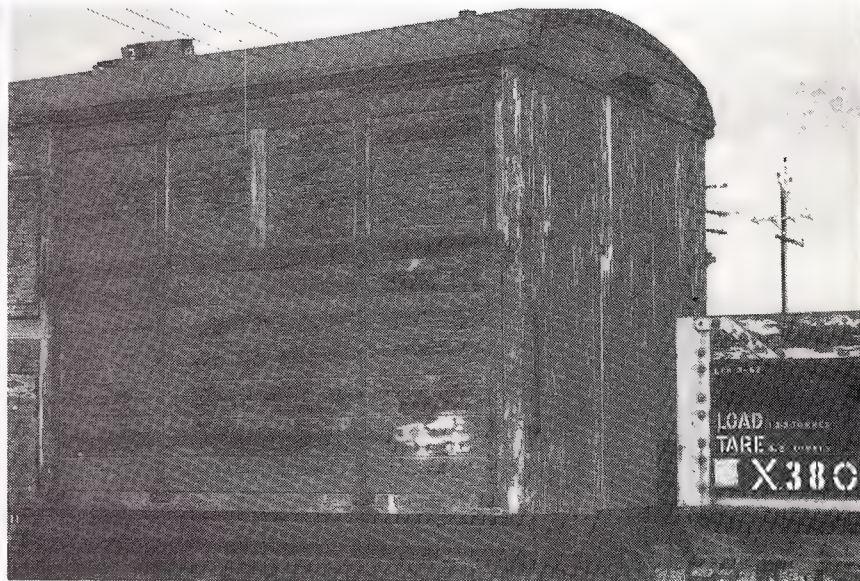
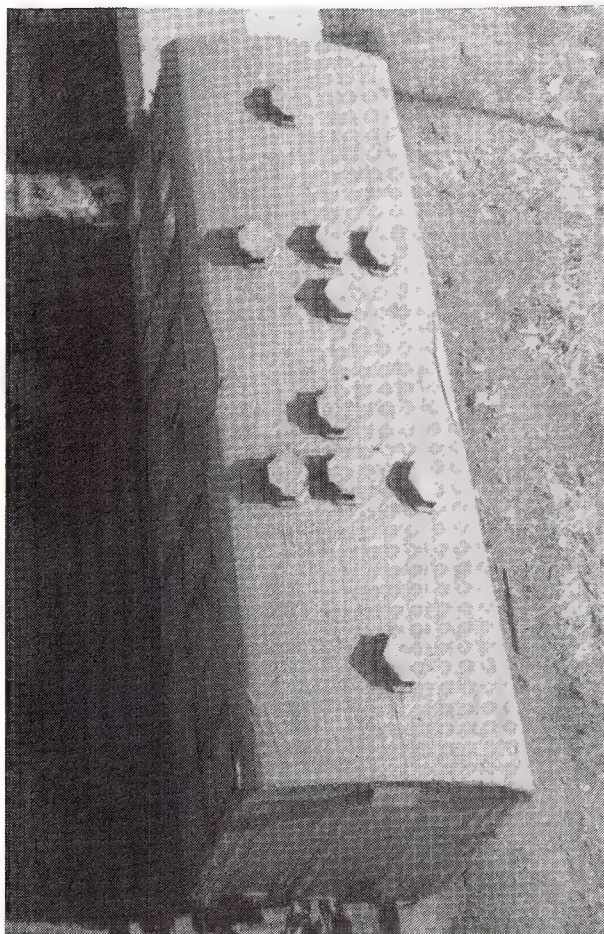
A clerestory BH is the first vehicle in this Overland consist.



The V.R. horsebox 7FP in the ARHS 'Hunt' special. Photo by Dave Flanagan.



This photo shows HB 7502 at Mount Gambier on 30/3/1952. This group of cars had been withdrawn from service. Photo by David Parsons.



were closed. When possible horseboxes were to be turned so that the horses' heads were toward the engine.

The doors of horseboxes were to be lowered carefully so as not to damage the doors or fastenings when coming in contact with platforms. When a horsebox, whether loaded or empty was detached from a train prior to its destination because of a hot-box, broken draw bar or other cause telegraphic advice had

to be sent to the livestock agent as well as Train Control, Trucks Office, Loco Depot, nearest Train Examiner and the destination station.

If somebody broke a door window he was charged thirteen shillings for repairs.

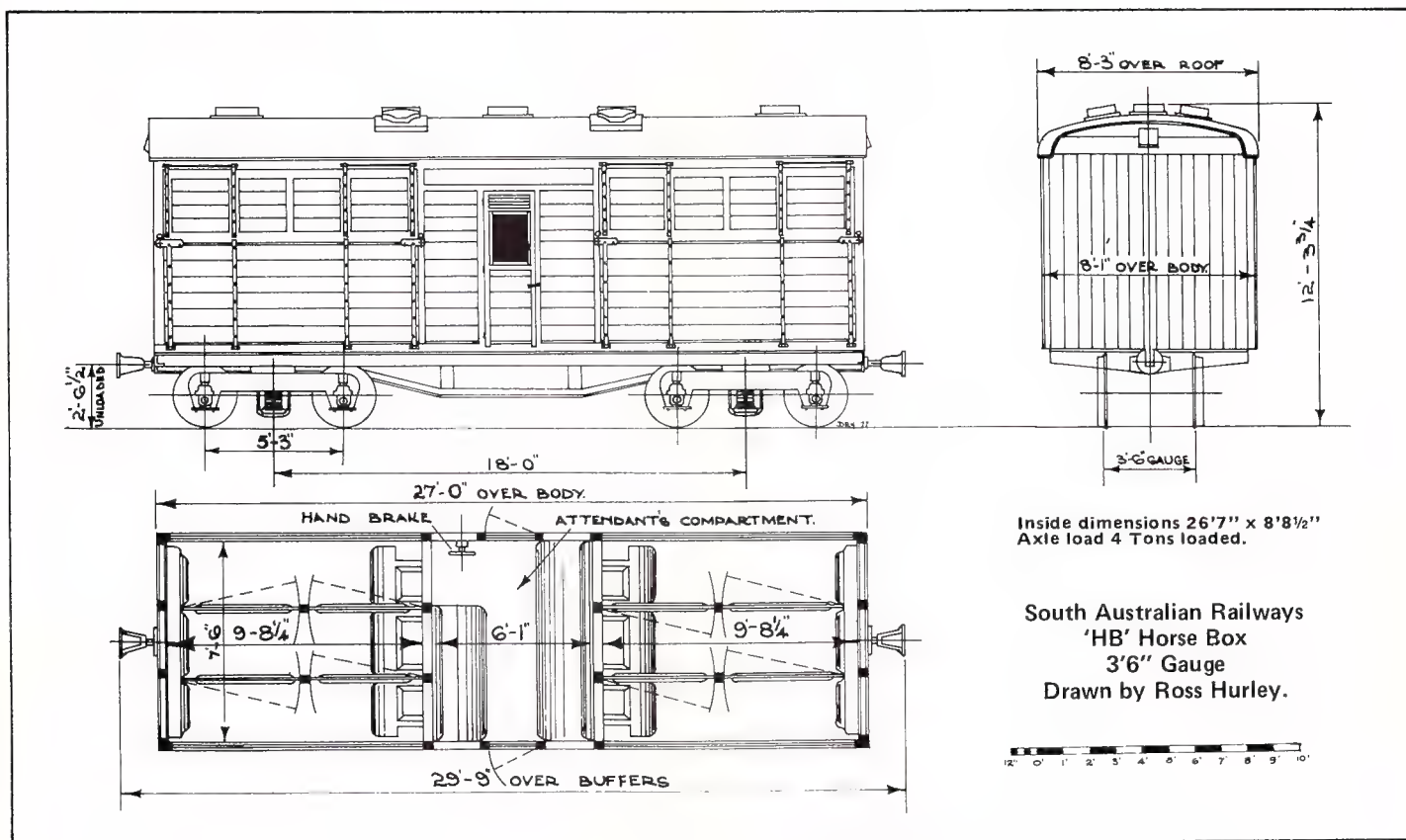
When calculating vehicle weight a horse was said to weigh 10 cwt. When a horsebox was to be added to a passenger train it had to be ahead of the coaches but trailing any freight

stock. A four wheeler had to trail any bogie vehicles and it also meant a speed restriction applied. Staff had to see that nobody travelled in a horsebox without paying the proper fare.

Thanks for assistance with the preparation of this article go to Murray Billett, Doug Colquhoun, Doug Black, Bob Yule, Dean Jackson, Kim Bird and Peter Fehlberg with special thanks to Gil Bate and David Parsons for much of the historical research.

THE HB CLASS NARROW GAUGE HORSEBOXES

The three members of this class (numbers 7500; 7501; 7502) were built at Islington Workshops and then issued to the South East narrow gauge division on 1/11/38. In October/November 1942 the interior was altered and they became brakevans and were transferred to Peterborough. In January 1945 they returned to the South East and then in February 1945 they were converted back to horseboxes and remained this way until the conversion of the South East to broadgauge in the 1950s. In May 1959 they were brought to Islington





and then in January 1960 they were stored at Penfield near Salisbury.

In May 1962 numbers 7500 and 7501 were converted to Accident Vans 5 and 6 than, in November 1962, 7502 also received the treatment and became number 7. All were sent to Peterborough. Their outward appearance was altered only slightly with the addition of gas bottles hung beneath the chassis on one

side. For many years 5 and 7 have been part of the scene at Gladstone loco depot whilst 6 went to Quorn before being returned to Peterborough where it was placed undercover in the roundhouse. This van is now in better exterior condition than the other two. These vans retained their original bogies which are similar to the standard style fitted to brakevans. The air vents on the roof are of a pattern that

was fitted to several types of passenger rolling-stock built in that era and are clearly seen in the top views taken from the coal stage which has since been demolished.

The remaining photos are of the HB class after conversion to accident vans and were taken at Gladstone in 1968 and 1976 by Hugh Williams and Phil Curnow.

LAYOUT PLANNING AND SCENERY

The entire track plan of the layout was drawn up on 1/8" graph paper and the width of the benches measured according to the width of the yards plus the width of terrain of scenery needed to separate one location from its neighbor, also determined by the radii of the reverse direction loops at the extremes.

Looking at the layout as it appears from the short north side one sees the east passage of 3'6" wide, a similar width east bench, 2'6" centre aisle, 4'6" west bench and then the west passageway of 2'3". This bench narrows and passage expands by a foot at the south end giving more room for the operator at Port.

Benches were erected using 3 x 2" oregon legs spaced about 3'9" apart and 3'3" high with 4 x 1" horizontal bearers and cross members. Risers cut from printing block mounts were then clamped to cross members to the required heights of the tracks in each situation and then screwed on. Track baseboard was cut to length and curvature on a band saw from large sheets of 5/8th ply which had been marked out from templates of the various radii and numbered. The band saw was extremely useful and cut down work enormously. Road bed came from 1/4 inch pine on which, at first, was laid Atlas sleeper strip and individual lengths of rail spiked into position, made easier by the spike holes already in the strips. Using a track gauge the opposite rail was then spiked. The same applied to point kits. Later the Shinohara track in all forms was employed. Before this some of the Tenshodo type with track already mounted on wood roadbed with in-milled sleepers was used.

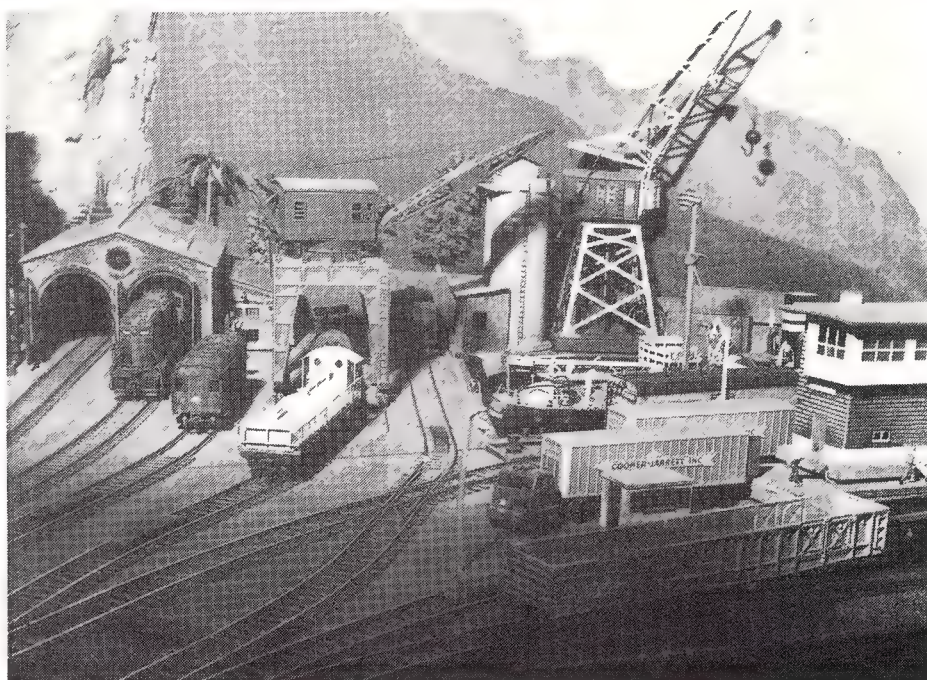
When all track including pointwork and wiring was complete in a particular section cork ballast was added by using a mixture of turps and clear varnish which was applied over the loose ballast with an eyedropper — slow but effective. Freight yards and station track was laid onto baseboard without roadbed and lightly ballasted, with tracks spaced close together, with the prototype 'six-foot' space between, giving the same crowded appear-

NSWR

Frank Shennan concludes describing his extensive layout.

Other articles describing the NSWR can be found in the following issues of the Australian MODEL RAILWAY Magazine. March/April

1977 (Issue 83); September/October 1977 (Issue 86); November/December 1977 (Issue 87); March/April 1978 (Issue 88).



A slack moment at Port where the weed-control set sits under a yard crane and semi trailers are emptied for onward movement by rail. A lengthy WGX butts an S wagon on a siding of empties. The far crane (Marklin) is powered and the signal box emits a kind of steam whistle sound on demand.



The opposite end of Central. Below this at far right is seen track at Orchardville. Beyond Central (across the aisle) is the amalgamated controls for the Mountain division with Lower Range station and township in the valley below Quakers Quarries.

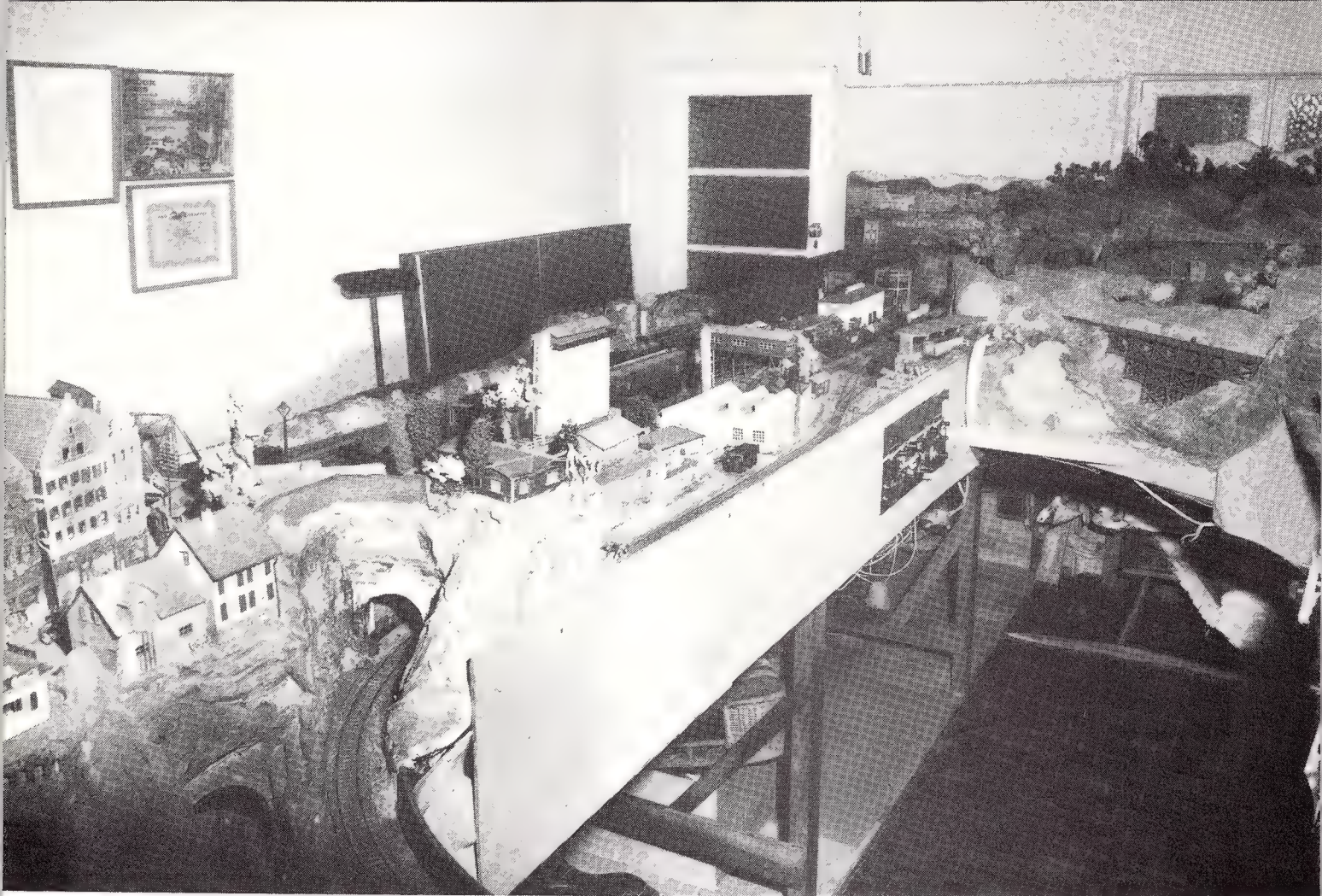
ance. An easy way to plan yards is to have all the readybuilt track points and lengths at hand and play around with various designs to get the most trackage into the least space through use of double crossovers and 3-way points.

Scenery and structures etc.

When the strips of baseboard were in place, rising and falling, twisting under and over each other like a clover leaf on a freeway, and track and the wiring complete, a start was made on the scenery, using offcuts from the baseboard and roadbed screwed to solid uprights cut from big block mounts. Careful checking was necessary to ensure clearances for one track under another as, for example, six different levels of track make the 160-180 degree half circle at the south end in a vertical plane of 14 inches yet only two are immediately visible and only one completely covered. Tunnel portals were then glued into place, plastic stone embankments affixed where prototypical, then came the chicken and fly wire to hold the plaster. Actually spackle, whiting and dry powder color were mixed and spread on over paste-sodden paper on the chicken wire otherwise straight on to the flyscreen wire, and the fissures and rock formations worked into the plaster while wet. I'm sure most who have built scenery know all this. However planning to site the many lineside structures took some working out as the space between one location and its across-the-bench counterpart left little room for anything but cliff faces, ridges and embankments with skyline trees and shrubbery. Trees were made from the soft pliable florists wire with eight or so strands being twisted tightly to form the trunks and the separate strands splayed out at top in odd shapes to



Port Wallaroo is the terminus of the Coast division. Car and loco sheds are close to the two-sided passenger platform. Another 19 class does most of the pushing and pulling in the yards and adjacent wharves.



A view along the centre aisle showing Suburton station in the left mid ground. The curving track presumably coming from Suburton is actually the Mountain division main emerging from under that station on its way to Lower Range.

resemble branches on which commercial lichen was trimmed and glued into clumps of leaves similar to our gum trees. Dyed sawdust in various shades of green made the grass covering where it was needed. The powder color is the best way of creating the desired tonings of rock face or pasture. The powder is mixed with Nudope, a fluid adhesive available in Sydney. There are lots of tricks in doing scenery which can be gained from one of Kalmbach's books titled 'Scenery for Model Railways' by Bill McClanahan and available at hobby shops and major bookshops.

A large 10 feet panorama window allows daylight to reach each part of the layout so the idea of using backdrops longitudinally down the middle of each bench to separate the stations on either side of each bench (ie Central and Suburton situation started earlier) was not sensible so tunnels, cliffs, and other devices were used with good effect. Where the layout butts the wall at south end, the city scene is behind Central, cliffs and mountains back the rise to Black Mountain and, on the west side, a seascape enhances the maritime illusion at Port.

Some modellers may be interested in the commercial kits and finished items used in conjunction with locally built structures etc. The bridges came from Mantua (metal truss), Ayres (timber trestle) and Authenticast (metal through). Suydam supplied the metal kits for the Mine, wharf and 3-stall engine house; Alexander the tunnel portals and water tanks, Fallier the Suburton station/cool store, quarry, houses etc., Varney a cattle pen, Tenshodo supplied the turntable, Marklin the slewing motorised crane and whistle signal box, Revell the engine shed, freight station, Bank etc. plus a host of other manufacturers like Merit, Pocher, — you name it. Mr. B. Bolton built the ship. Friends provided several buildings and the writer built most of the stations, silos, coal stages, freight sheds and lineside furniture, trees etc. Most show signs of wear and damage caused when cleaning tracks. Some items will be identified in the captions with the respective photos.

ROLLINGSTOCK CONSTRUCTION

It may interest builders of rollingstock to learn the earlier method used to mass build the 12 72'6" MBE type cars. Blueprints were obtained from the NSWPTC of the TAM, MBX, MFX, MCX and TBC which are all the same dimensions but have different window spacing and sizes and door locations. I traced the sides and ends of each in indian ink on the one sheet of artist's board then ordered a printing block to be made reduced to exact H0 scale size. Several sheets of Winsor art board were cut slightly oversize to suit the size of the block, and several dozen sheets printed. Two sheets gave sides, ends and doors for five complete cars. Of course the doors and windows on each side don't match each other vis-a-vis but nobody sees both sides at once so this departure from prototype was incidental.

Using a steel rule clamped tight to a backing board holding the printed cards, and using chisels of a width that exactly matched the window spaces to be cut out, the window tops, bottoms and sides were then punched around the frames and the card in the glazing space knocked out.

Before doing this the tedious job of scribing the strip panelling along the side, ends etc. was tackled using a set square for accuracy. The overall varnish finish was got by using diluted burnt umber indian ink brushed on and quickly smoothed to an even finish with a rag, ending with a dull appearance which the prototype exhibited through neglect of exterior cleansing, a fact which no doubt led to the varnish type cars being overpainted in the subsequent uniform livery.

Lettering and car numbers were added when the cars were completed. Small brass shoe brads were inserted in correct locations on roofs to simulate vents.

An exacto blade was used to take out the crown windows (now eliminated from most of the prototype cars). The body frame consists of roof, ends, 1/4" square full length side strips at bottom level and two spaced bulkhead pieces, all made from balsa wood. A template

was made of the semi-elliptical roof and rounded ends to obtain true curvatures then rough filed and sandpapered to correct shape. The underside edges of the roofs were recessed to take the width of the cardboard sides, behind which thin clear plastic strips were glued for the window panes. Some of these were cut to show a half-open window. Off-white paint frosted the lavatory windows. The ends were also shaped to the slight off-square construction of the original and the doors at sides and ends cut out and the individually printed ones reinstalled in their recessed position. Thin brass wire made the vertical handrails at doors and filed brass pins became the door handles and end light brackets etc. Underframes came from English rail bullhead type brass rail used on early layouts and solebars from piano wire on brass pins. The diaphragms were originally hand folded into the concertina style but these locked on tight curves and were later replaced with solid outline type. Buffers also locked and were removed. Couplers were mounted on the bogies to overcome derailments from excessive sideswing. The bogie sides were cast in linotype metal, axleboxes drilled from the inside and bolsters soldered on, a tricky business. Jackson solid wheels completed the running gear.

Battery boxes, brake cylinders and other undergear made from balsa and very thin dowels were attached to floor cross members. The cars have no floor which is useful for weighting within the body (discussed under 'operations') with lino slugs glued into position above the floorline. I am still happy with these cars after 33 years of use, also their agreeable appearance in the former prototype natural wood varnished finish.

Waist and headbands on sides and ends and lamp brackets etc. completed the construction. These days, as is widely known, epoxy casting eliminates the methods described above and was used for the BCW, LLV, TRC, MHG and other SMRS mass-built models.



A closer look at Central. The high roofed EHO rests on the van siding.

USE OF ELECTRICAL COMPONENTS

The electrical circuitry used for this layout is of the orthodox type as used by the Sydney Model Railway Society and perhaps other clubs. The 240 AC domestic supply feeds to a bank of transformers converting to 12v. DC through respective rectifiers, one each feeding Central/Central loco, Suburton, Midplains, Midplains yards, Mountain division, Orchardville, and Port/Harveston. Two others are used for battery recharging and for the offer-accept circuit and the last converting to 6v. AC for signals.

Control board equipment comprises obsolete ex-PMG switchboard keys of various combinations, also relays, the keys being mainly the old 302, 1541 and 178 double pole, double throw type. The 302's provide two changeovers plus two make-breaks for each direction thrown. Contacts on some keys have been increased from canibalised types to give a larger range of functions from a single throw. For instance the offer-accept key, which has to be thrown in the direction of train travel, has also to carry the 10.010 feeds powering traction on the sections concerned, the offer-accept leads to the adjacent stations involved and the signal wiring.

A large number of wafer type contacts handle a greater selection of needs, being built up to 10 gangs, especially for remote control multi-purpose feeds. On-off push-pulls are employed to feed or withhold power to loops, yard sidings and special sites not governed by the position of points, while press buttons guard dead-ends ensuring that locos don't overrun. The leads from all the keys etc. go first to terminals on strips behind each control

board. These are made up of 1/8" brass screw and nut type, all wiring having punched hole lugs attached at ends. This system prevails throughout, ie. is continued from terminal strip to the proximity of the function to be served where another screw and nut joins that extended feed to that from the point motor, track or signal as the case may be. This obviates most of any prospective under-base-board upside down soldering, particularly when tracking down faults.

Additionally to aid tracing feeds a color code is used as follows:

Traction power — positive to tracks: olive green

Traction power — positive to frogs: dark red

Traction power — negative: black

Points power — positive: dark blue

Points power — negative: bared brass encircling layout

Points power — negative jumpers: yellow

Signal power — red aspect: light red

Signal power — orange aspect: orange

Signal power — green aspect: light green

Signal power — negative: grey

Offer-accept power — positive: lilac

Offer-accept power — negative: purple

Offer-accept power — inter-board offer: coral

Offer-accept power — inter-board accept: pink

Remote control specific functions: White, light blue, brown.

Remote control inter-com. multi cables.

The relays mainly switch power from one control to an adjacent one respecting intermediate main line sections where either controller can hold a train while clearing a shunting movement on the home main, also for remote working. The Midplains main control board can, as stated, remotely control traction

power and points at Suburton on the Central division, its own Yard traction, but not points, and traction and most points throughout the total Mountains division. This is all sorted out through 160 feeds to terminals and to relays plus another 40 terminals behind the Yard board. Hence the choice of screw and nut terminals for easier shots at our resident gremlin who fouls up the whole shebang occasionally.

Incidentally the transformer/rectifiers are predominantly scratch built by Society friends, a few are Hammond & Morgan and one Codar. Some H&M controllers are used as well.

Point motors are almost all the ex-PMG single coil type which, when energised, attracts a drop shutter on which is mounted the arm extending up to the point blades. When power is cut off a spring or loaded weight pulls the shutter from the coil and restores the blades to normal position. These coils have been in use now for 20 years and except for a couple of burn-outs through having been left on over a week or so, they have been well worth while. Naturally a lot more description could be added on the electrical side but what's been said sums up the main factors.

The signal circuitry has been a fiddling affair what with the wheat bulb wires being so fragile and tiny. Being 4-6v, care has to be taken that a crossfeed from the 12v connections on the same keys doesn't blow the whole signalling circuitry. To protect this situation is a fuse upon which dubious reliance is placed. The layout is virtually fully signalled with gantry, mast and ground type colorlight types of two or three aspects. They are mostly from Sayer Chaplin, Tenshodo and a few other

Continued on page 46.

General view of Central yard looking north towards the down end.



1978 SYDNEY TOY FAIR

The 1978 International Toy and Sporting Goods Trade Fair was held from 5th to 8th March, 1978. The Fair again occupied two floors of the Sydney Hilton Hotel and two floors of Centrepoint.

The model railway offerings were naturally given our main attention. Quite some time was spent discussing matters with the various railway product exhibitors and it was noticeable that the magazine had become increasingly accepted by the model railway industry.

Very little new Australian outline equipment can be expected this year but indications are promising for the future.

LIMA — has several new items in its catalogue which should appear in the next two years, including the S.A.R. 8300 class brake van. The 44 class has been painted as a 930 class of the S.A.R. and a correct profile nose is proposed for the V.R. 'S' class (also to appear as a 42 class and a GM 12) but 44 class bogies will, on present indications, continue to be used. The HGM Indian Pacific power van will hopefully appear this year but the TAM and MBE are unlikely.

Several new items are proposed for the '00' British range including an LMS 2-6-0 'Crab', a Western diesel hydraulic loco and a 64 XX 0-6-0 pannier tank. A GWR horsebox and a bogie siphon are also planned.

Additional items in British 'N' scale will bring this range much into line with the '00' range.

Without doubt the most unusual items seen were a locomotive and several items of

rollingstock in Army camouflage — different to say the least!

HORNBY — had no new locomotives or carriages on display but the catalogue promises some definite improvements for '00' gauge modellers. It is apparent that much effort has been put into upgrading Hornby locomotives with improved wheels, extra detail, separate handrails, etc. The new locos include a King class 4-6-0, a class 29 Bo-Bo diesel and a GWR 0-4-0. The LMS 'Jinty' returns and several of the present range of steam locos appear in different liveries.

Sets appear in very attractive new packaging and include a simple three speed mains power unit in lieu of previous battery power units.

Some very nice new structures were seen. The range includes station buildings, goods shed, signal box, brick based water tank and an engine shed.

No new items appear in the Australian range.

CYCLOPS — No new items on display.

TYCO — A new gimmick set in the form of a complete train that glows in the dark. Also on show was further additions to the range of limeside structures.

MARKLIN — Had a number of new items of rollingstock on display.

ROMCO DISTRIBUTORS — WRENN — Display showed a return of the class 20 Bo-Bo from the old Hornby Dublo days. Welcome back to a popular model. Also due for release is the Duchess of Hamilton 4-6-2 Pacific class plus the old Hornby Dublo Pullman cars in LMS maroon and Southern green colours.

SEARLE'S — LGB — A number of new additions to the rollingstock range plus a brass handbuilt model of a SAR class 24 2-8-4 steam loco. This was the only one in Australia at the time and was sold during the Fair.

B.H. WINN — PIKO — The H0 range on this stand was well augmented with the inclusion of a new range of TT equipment, both gauges being of European outline.

A.M.R.I. — Some new items in the popular Pola range; some reintroduced. Full range of Merit figures on display along with a good range of Preiser and AHM figures. Particularly liked the red indian set — minus, of course, the Picnic bars.

HARDY'S WINES — Probably the most popular stand at the Fair. Nothing new on display but at least they were giving out samples!

DAWN TRADING — A good range of Testor's paints on display. Also featured a couple of AJS brand track cleaners. Of H0 scale these self propelled little units resemble the small track maintenance units familiar to all.

No doubt there are some items missed from this report but, then, it is not possible to know everything that is new as against that which has been out for some time. If we have missed exhibitors we are sorry.

The fair was an impressive reminder of the vast range of model railway products now available from overseas from mass production manufacturers. This must augur well for the future of the hobby.

Graham Ahern and Allan Brown

INSURANCE FOR MODEL RAILWAY CLUBS

The letter from Bradley Hinton in the January issue of AMRM raises a number of points about insurance. The Canberra Model Railway Club has looked into this business of insuring the Club's layout, and offers this advice to other clubs.

The two main problems that any club must face are

- a) what do you insure?
- b) against what risks should you get cover?

What you insure depends on the value of the items. And that poses the problem, how do you assess the value of a layout? You can assess the cost of the components. A layout might cost a club \$500-600 or even \$1,000, of which the track and electrics will constitute the greatest amount. But what is the value of the scenery, and of the buildings? A building may be scratch-built from materials that cost \$2-3; it may take a modeller 100 hours to construct the building; what is it worth? You cannot easily assess the labor content. Controllers can be insured, and locos and rolling stock, as they have an assessable market value.

The main risks against which you may insure will be malicious damage at any time, theft, fire, and accidental damage during transit. Since the assessed value of the layout could be low, there may be little point in insuring against these risks. So our building has an assessable value of \$2-3; but that \$2-3 will not replace the building should it be damaged or stolen.

But if a club were to assess as a value for a layout some kind of market value, then the cost of premiums might be prohibitive. As a result, no club could afford to insure its layout. But that may not be a bad thing, because the money received from a claim would not replace the layout.

In any case how do you assess a market value? No one may be prepared to buy the layout, or any part of it; it has, then, no market value. Much of the value a club will put on its own layout will derive from the amount of time its members have spent constructing and maintaining it, or from some kind of extrinsic value — which may be a very subjective assessment.

By far the most important cover that any club might take out is public risk: that is, the club should insure not against the public damaging the layout, but against the layout damaging the public. And for this, a cover of \$1,000,000 might not be too small — yes, I

mean it; a cool million! This type of cover can be arranged through local insurance offices.

I have been describing so far the insuring of club property. I am assuming that members have their own layouts, and particularly their locos and rolling stock and their electrical equipment, covered by their own house and contents policies, including any special cover that may be necessary if these items are carried away from the owner's residence.

Club members who have people into their houses to operate or work on their layouts should make sure that their own public risk cover is adequate. Most house and contents policies have a public risk cover included; but in the light of some recent claims, it would be wise to ensure that this cover is high — say \$250,000 or more.

In addition clubs should make sure that they take out a special insurance when they have an exhibition open to the public. The people responsible for exhibitions in England have, in conjunction with the Prudential Assurance Co Ltd, worked out a policy specially to cover model railway exhibitions. The Canberra Model Railway Club took out one of these policies for its exhibition last year, and will do so again for future exhibitions, at a reasonable premium. The main risks covered by this special policy are

public liability relating to accidental death or bodily injury, to members of the organising club, to members of invited clubs, and any other invited individuals
damage to property (such as locos and rolling stock) from the start of the journey

to the exhibition to the end of the return journey.

This summary is obviously very brief, but it should give some idea of the kind of cover effected.

I hope that this article indicates to club executives that they should look closely into the business of insurance. In most cases, a talk to a local insurance agent will answer most questions. Clubs wishing to take out the exhibition insurance mentioned above should contact: John B. Denison and Partners, Assurance House, 20 Loughborough Road, West Bridgford, Nottingham, England. Telephone: +44-602-86 0222.

David Morgan,
Canberra Model Railway Club.

AMRM NEWS

Compiled by Bob Gallagher and AMRM Staff.

One of the jobs in the AMRM office must be one of the most tedious in existence. Opening mail, entering each cheque into banking books is a lengthy, tiresome duty, but as boring as it is, there is a few interesting aspects that can tend to give a little enjoyment to the task. As the envelopes are opened, it is quite easy to note that AMRM readers come from a wide cross section of the Australian community, there being doctors, dentists, Bishops, both Protestant and Catholic clergy, real estate agents, wool agents, farmers, sailors (both naval and merchant), army and air-force personnel... the list is endless. One can also become envious of those who move around in their jobs; from Victoria to NSW, then to England and even Canada. The residence of readers also has some interest with naturally the majority coming from Australia, but readers spread to New Zealand, Canada, US, Britain, South Africa, New Guinea, Germany and even Moscow in the USSR.

From the subscriber applications of late, it is hoped that quite a few new subscribers reside in the Queensland Sunshine Coast area, there being sufficient numbers to start a small club. If any individual reader from the Sunshine Coast is interested in forming a club, please write to AMRM and we will place an appeal for members in AMRM

Clubs

One successful method of exchanging ideas, learning unknown methods, and forming strong friendships is to belong to a model railway club. Unfortunately many modellers live in what is considered to be outer areas, and as such do not have much chance of making that first contact with other modellers living in the same areas. For some years AMRM has been fostering the formation of new clubs by publishing a short appeal (free of charge) to interested modellers living in the same area in anticipation that they may be able to get together and form a club. With interest in the model railway hobby growing steadily there is a strong chance that modellers may be living in close proximity to each other without knowing it. If any readers are interested in starting a club or group, please feel free to send relevant details so that an appeal to interested readers can be made.

Subscriptions

To many readers the following will be repetitive and 'old hat', and most will have stopped reading by now, but if you are a subscriber and wish to avoid missing a copy of AMRM at renewal time (as many have done lately), please keep reading.

One of the reasons AMRM can be supplied to subscribers, at a relatively inexpensive rate is that all postage is via a bulk rate which has a saving, at present, of up to 26 cents per magazine. To gain full

Continued on page 35.

MAILBAG

Sir,

In regard to the vexed question of local manufacture you have made a good suggestion that new manufacturers be sought by going overseas. However, I don't suppose that many manufacturers in Australia would have the capital available for a limited run of any prototype in brass.

White metal kits made in Australia are very dear when compared with their British counterparts, no doubt many valid reasons exist for this but the indication is clear, try the UK manufacturers for Australian prototype models.

The white metal kit is suited to limited run production and the moulds are re-usable. Surely we have enough competent modellers in Australia to produce the masters from which the moulds can be made? Obviously the British manufacturers have the expertise and know-how, we can produce the masters or if necessary the drawings and photographs.

This may not be an economic proposition of course, I have no information on likely costs and import duties etc, it may well be better to produce in the UK and package in Australia or alternatively have the moulds made overseas and the castings here. Has anyone researched the matter or have figures available which would add to this discussion?

A stranger to the hobby reading your pages could be excused for thinking that for the railways of Australia read New South Wales, those of us confined to 3'6" gauge must find the outlook very bleak indeed. Unfortunately we are not all in a position to scratch build so the need for relatively cheap kits is urgent.

You also ask for comments on Reviews. My opinion is that it should not be necessary to criticise down to the last .0001 of a millimetre and the guiding rule should be — Does it look right? — taking into consideration established manufacturing tolerances etc, tools and equipment, etc should be judged on their competence to the job intended and safety in use.

Finally, whilst the standard of AMRM is improving with each issue, despite the comments above, can something please be done about the spelling and/or printing mistakes. The March/April edition is particularly bad and detracts from the professional standards sought.

P. J. Brixey,
Warwick, 4370.

The reason Australian made kits are more expensive than the British made units is due to a number of factors. Firstly, the 'run' of the British kit is far greater than the Australian unit, that is to say that demand or expected sales of the British unit is at least four times that of the demand or sales of the Australian made kit. This immediately puts the price of the Australian kit higher, for the tooling cost has to be spread over fewer units. Demand in Australia is not as large as many modellers believe. We are not aware of the exact numbers of brass ready to run, Australian profile, locomotives, but knowledge and experience of organising the manufacture of Australian loco kits does give us an indication that the demand for NSWGR profile does not even come up to half of the minimum order of British manufacturers. The demand for SAR and VR units was paltry while that of the QR was so anemic that the numbers had to be boosted by NSWGR modellers to obtain an order for 30 kits. Granted that was five years ago but little has changed in QR modelling since then. To make a commercial run of a product possible it must have sufficient demand or the price be larger than expected.

The second factor is that Australians receive a larger remuneration for their craft than the British, and in most instances the Australian made white metal kits are more detailed than the British counterparts. Any craftsman, who spends his time making masters should expect to be fairly paid for his work. Recent evidence has shown that some of the Australian commercial modellers have been receiving less than the dole for their hourly rate of pay. What right do modellers have to keep these craftsmen on subsistence wages? If we want the products, and I am sure we all do, then we must expect to pay for them, and with luck, in a few years or so, the demand may grow to a point where the unit price of a loco kit will be lower.

The popularity of NSWGR as a modelling theme grew ahead of the other systems in 1963 when Model Dockyard released the C38 model in HO. The popularity of NSWGR has continued to outstrip the growth of other systems since and no doubt the availability of NSWGR based kits and AMRM articles has had some bearing on this fact. But who is to blame? Both the kits and the articles have been produced from within NSW and the demand came from all over Australia. Most other systems including QR have seen kits based on the local prototype produced but they have never continued, no doubt due to lack of sales, or in a number of instances where a kind hearted modeller used a kit to form the basis of a duplicate kit, which was released or sold at a much cheaper rate. This 'PIRACY' has definitely occurred

in Queensland and South Australia (as well as other states) and has been a direct reason for the withdrawal of manufacturer/s from the arena.

If any one specific area of Australian modelling is to progress rapidly out of the darkness the lead must come from the heart of the area. As a suggestion, why not look to QR modellers in Queensland to produce some kits, and show the rest of Australia that QR models, in HO scale on TT (12mm) track is an attractive modelling alternative. Some more QR based articles in AMRM would also help increase interest, but here again there are very few interested in submitting articles.

I can assure all readers that we here at AMRM do all we can, in the time available to delete spelling and printing errors. We are restricted in time for we all work on AMRM in our spare time, after we have been to work and also carried out the duties that our family life demands, and being repetitive, we do not seek nor are we paid for our task. Since the present staff assumed control of AMRM the overall aim has been to improve AMRM; we believe we have, and we will continue to strive to maintain the standard. We apologise for any errors, but do question the reason for complaining; if modellers do not require their models to be accurate to the ".0001 th" degree, why should they demand that their magazine be accurate to the ".0001 th" degree.

Bob Gallagher.

Sir,

Thank you for the articles on the locomotives and stock on the North East Dundas Tramway (Nov/Dec, 1977), and the TGR horseboxes (Jan/Feb, 1978).

However, I must take your authors to task over several statements made in these articles.

Firstly, very few mines in the Zeehan area were connected directly to the 3'6" gauge system. Most mines owned 2'0" gauge tramways which were connected by, and "horsed" by the Zeehan Tramways Co whose stock also ran on mining companies' lines. The Tramways Co line connected with the 2'0" gauge government lines to North East Dundas and the smelters, in the railway yards. Privately owned 2'0" gauge timber getting lines also joined the system in Zeehan.

Secondly, the line to Grubbs mine (Colonel North actually owned the mine at this stage) was not an extension of the North East Dundas Tramway. Originally a private 3'6" gauge line, it was regauged to 2'0" and used to connect this mine and others to the railway yards. Parts of it was later purchased by the Government and extended to serve other mines, four years after the opening of the North East Dundas line.

Thirdly, the rolling stock used on the North East Dundas Tramway was, for the time, quite modern. Wooden underframes sheathed in steel were used, with all-steel bogies, coil sprung, and equipped with vacuum braking. It appears that at a later date, the underframes were replaced by ones of all steel construction. The only wooden bogie vehicles in service were the usual four wheel log bogies. All stock was owned by the government.

The formation of the North East Dundas Tramway, contrary to the article, can be followed for its entire length, the only obstacles being fallen bridges.

On the subject of horse boxes of the TGR it was stated that HB+ wagons were used on the 2'0" gauge Zeehan and North Dundas Railway.

Historically the HB+ wagons were used originally by the Tasmanian Main Line Railway Co on their 3'6" gauge line between Hobart and Launceston. They were later relegated by the TGR to the isolated Sorell line and the (then) isolated Dundas-Zeehan-Strahan line.

An HB+ wagon would have had to be entirely rebuilt to suit the loading gauge of the 2'0" North East Dundas line and no such wagon appears in the TGR 2'0" gauge rolling stock catalogue. I think some confusion may have occurred between the titles Dundas Railway and North East Dundas Tramway.

My main concern in writing is that inaccurate information, once printed, tends to cloud the facts.

M. Chandler,
Zeehan, 7469.

Thank you for putting us straight on our errors. (Ed).

Sir,

I have observed over the past years that in the magazine there have been many articles and even editorial comment on the need for we modellers to support local manufacturers, local import houses and retail outlets. With this I heartily agree and have always tried to support locally manufactured articles which could run on a NSWGR layout. However, the reverse is also true. The manufacturer and etc, should also encourage the modeller to deal with him through the service and civility which he offers. However, this is not always a two-way process as I imagined.

May I cite my two latest experiences which has left me rather cold and with no alternative but to again deal elsewhere.

In the first instance I wrote to a retail outlet requesting advice as to whether I could be supplied with a particular item of brass rolling stock and took the courtesy of enclosing a stamped addressed envelope for a reply. The reply came back in my envelope hand written on the bottom of my letter in almost illegible script "No we are not getting in

painted. Available only in brass finish". Needless to say that did not increase my opinion of that firm as one to transact further business with as I had had many dealing with the firm over past years.

In the second instance I ordered a kit on 7th October, 1976, from the supplier who acknowledged receipt of my order and advised "We are afraid that your loco is unlikely to reach you for about six weeks". Six months later not having heard further I again wrote and was ultimately advised "It should enter production in the next few months and will be sent to you as soon as possible". Believing in the old adage that "Good things come to he who waits" I was prepared to sit it out a little longer until my patience was finally exhausted. So in March this year I again wrote referring to the previous correspondence and advising that as 17 months had lapsed since I originally placed my order and sent my money I felt I was entitled to something. Imagine my surprise when my letter was returned with the following handwritten note on it "Sorry for the delays but... is only a spare time job and there hasn't been enough of that spare time, refund herewith".

I would again repeat that not only does the modeller need the local manufacturer and should and must support him if the industry is to survive, but what is the use of some day a manufacturer, if and when he feels like it, producing a product if by that time the modeller has given up in desperation like I have and sought an alternative product or supplier.

Neil Cram,
Penrith, 2750.

Sir,

HELPI I am a poor deprived modeller of Australian prototype in 'N' scale and am trying to find a colour blue that looks right on Victorian Railways equipment. Please is there any one who can tell me of a good paint or mixture.

P. Holland,
Lyneham, 2602.

Sir,

In regard to the comment in AMRM News about whether you should make note in the Reviews section about incorrectness in detail, I think that this should continue. Many modellers like to know what is right or wrong with a product before they buy it. I do not think that this comment will restrict the sales of any models whatsoever. In finishing off I would like to say I enjoy reading this magazine and it is well worth the price we pay for it.

P. Dimond,
Nth Lidcombe.

AMRM NEWS.

Continued from page 34.

benefit of the bulk rate all copies are posted in one lot. Obviously, any late renewals that miss this postage would have to be posted at the normal postage rate, thus adding to the cost of the subscription.

To achieve a bulk posting, where over 1000 single envelopes and over 2000 copies in packages are posted, a number of preparations need to be finalised a few days before the 'post out'. For record purposes each subscriber has a card (which is also used to address each envelope) which is kept in the office of Ted Cole, our Subscription Manager. Incidentally Ted lives about 16 miles from the AMRM office and about 33 miles from our packaging area. Before a subscription can be renewed, it must first be received at our main office, then be forwarded to Ted's office where it is cleared onto the car system and then the envelope printed. To allow sufficient time to efficiently complete the task a cut-off date of three weeks will now be applied. In real terms all subscriptions must be in our hands three weeks prior to publication date, or to be more specific, if the subscription renewal or application is not posted to AMRM during the first month of issue there is little chance that you will receive that copy of the next issue.

Unfortunately some subscribers have chosen to ignore the special (be early) request on the renewal form and the repeated appeals in AMRM and have missed a copy of AMRM. Likewise some readers have sent money and application for a subscription on the day of posting or a few days later and have become quite bitter at not receiving the issue just posted. In these such instances there is little we can do to assist. So if you want a continuous subscription send in your money, renewal form and subscriber number (printed on the envelope) as soon as you receive your copy.

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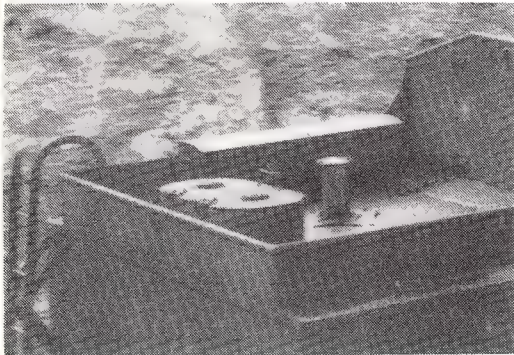
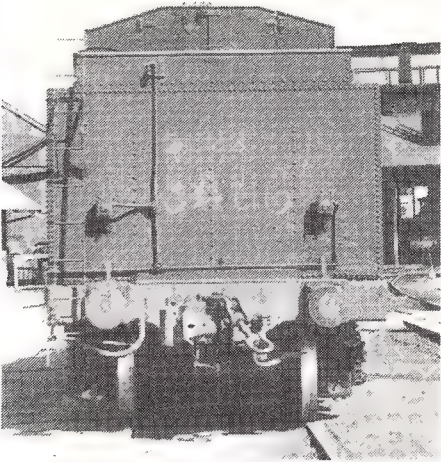
If all goes well, this issue will be a mammoth (for AMRM) 64 pages, the largest it will ever be in the foreseeable future. The increase in size is due to improvements in the printing industry where many pages can be printed at the one time. It will also mean that AMRM will fluctuate in eight page lots. A problem is evident for we do not have sufficient articles to continually fill a 64 page issue, and thus we will have to rely on reader contributions to be able to publish each large issue.

Articles may be large or small, descriptive or very brief. They should be from the experienced and the

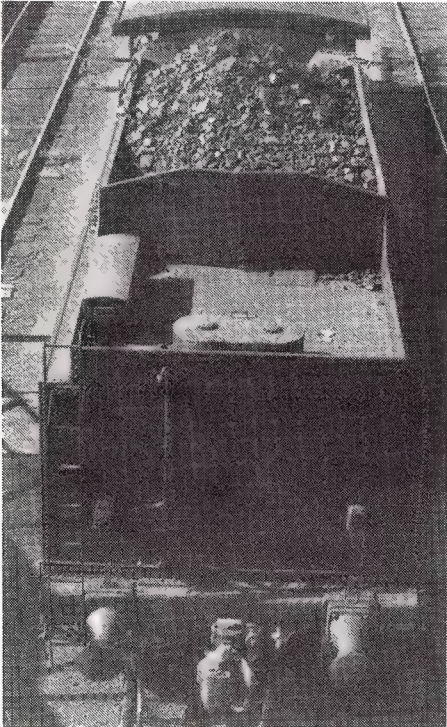
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N.S.W.G.R. STANDARD TURRETT TENDER

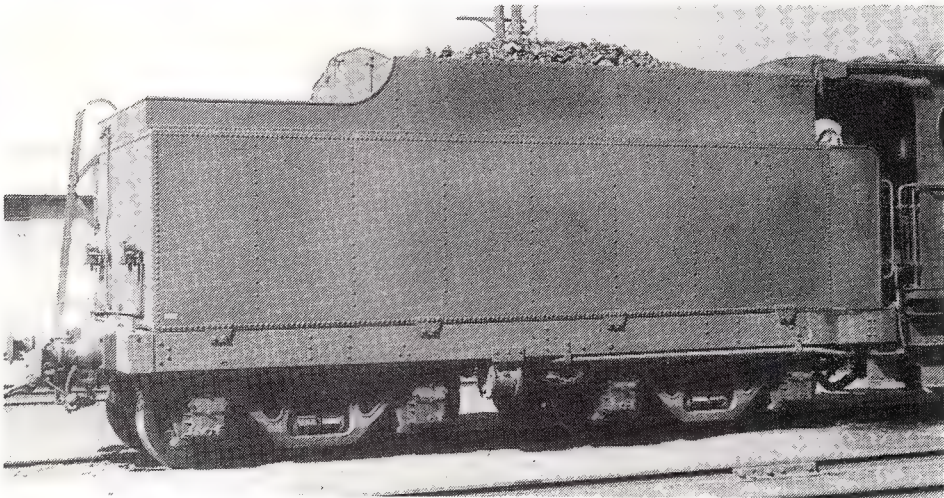
Photographs of the Standard Turret tender were supplied by Bob Gallagher.



Note the variation in the water hatch area between 5476 (above) and 5427. A breather pipe is utilised on 5476 but not 5427.



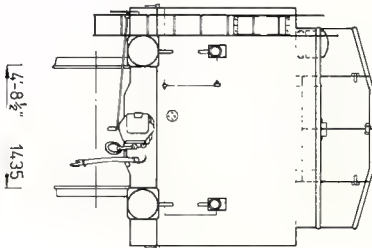
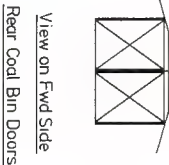
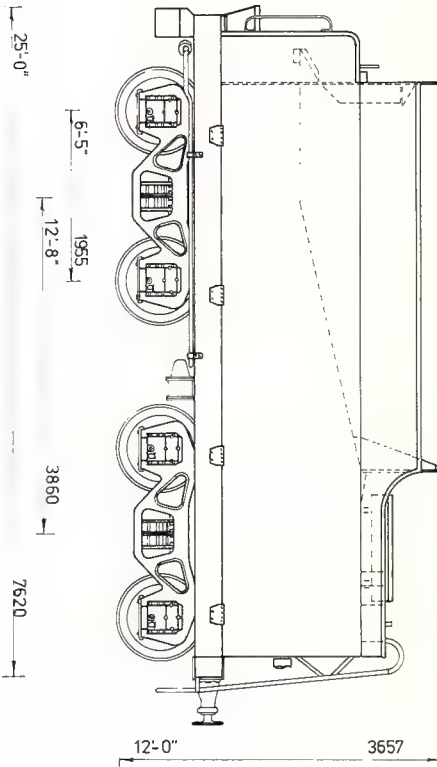
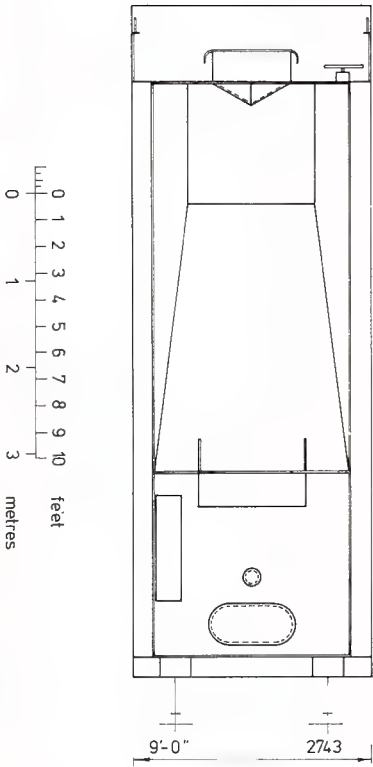
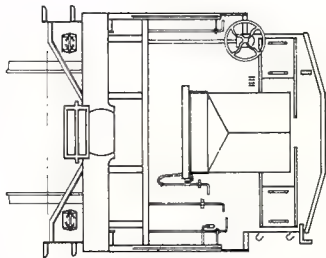
Text and photo on page 46.



NSWGR STANDARD TURRETT TENDER.

Drawn: B. Gallagher 1972.
Traced & Detailed: R. Johnson 1978

Dimensions and Details were compiled from
Tenders off 5112 & 5472, plus the NSWGR
General Arrangement diagram.



THE BUILDING OF A KATIE

Laurie Evans gives a blow by blow description of the building of a H0 scale NSWGR D55 locomotive.

In 1918 the first of a new class of locomotive was introduced to the NSWGR. Designated the D55 class, it differed somewhat from the earlier D53 class by the inclusion of Southern valve gear. The D53 was fitted with the Allen straight-link motion.

As the 55's became due for re-boiling they were fitted with standard boilers without the tapered boiler ring. Some were also fitted with a standard goods turret tender.

For reference to the above I used a D53 Data Sheet, a General Arrangement Plan of the Southern valve gear (available from the NSWPTC Archives Section) plus sketches and measurements, etc, taken at the NSW Rail Transport Museum, Thirlmere, NSW.

The list of materials to construct this locomotive is as follows:-

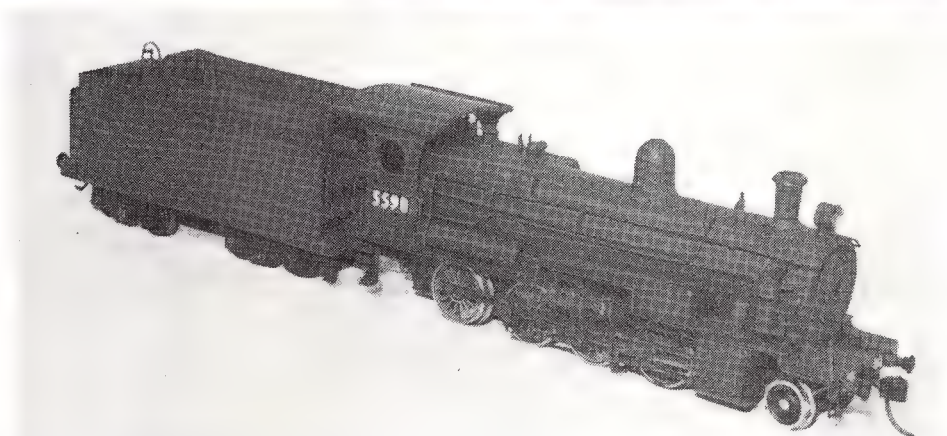
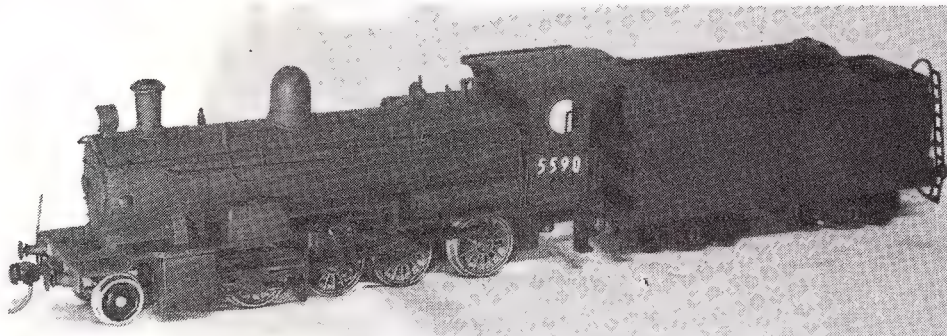
For Loco.

1/16" brass strip 1/2" wide, 2 pieces 7" long.
1/32" x 1/32" brass section 10" long.
4 Romford axles.
4 Romford flanged insulated wheels 15 mm dia.
4 " flangeless insulated wheels 15 mm dia.
2 wheels, 1 axle 9.5 mm dia.
Sheet brass 30 gauge.
Sheet brass 1/32" thick.
Shim brass .003" thick (for boiler bands).
Brass tube 13/64" OD.
Brass rod 7/8" OD (for smokebox).
Brass rod 3/8" OD — about 2".
Brass rod 1/4" OD — about 4".
Brass wire — different sizes for piping, handrails, etc.

Some proprietary lines — 1 Steam generator.
1 Compressor.
1 pr. Clack valves.
1 Smokebox door.
1 pr. Buffers.
1 MW005 motor.
1 30-1 or 40-1 worm and gear.

For tender.

Sheet brass 30 gauge.
Sheet brass 1/32" thick.
Brass rod 3/8" diam. — about 1" long.
Brass ladder.
1 pr. buffers.
1 small wheel about 7/32" diam. (for hand-brake wheel).
Brass tube — about 5/16" diam. — 3/16" long.
Data Sheet plan. (D53 class).



Building the Chassis.

First, cut the 1/16" brass strip to 4 11/16" long; soft-solder together; cut and file to shape making sure to be square on the edges. Set out position of axle holes as indicated in Fig. 1. Drill No. 33 holes and ream with 1/8" diam. reamer. Separate and clean off all the solder with a file. With remainder of 1/2" brass strip cut into 3/8" wide strip.

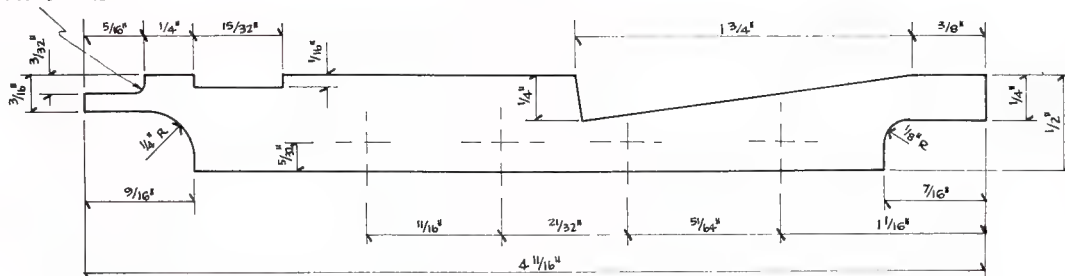
To make up the chassis we need two 3/8" spacers. Place a piece of 3/8" diam. rod into a lathe; square up one end; then part off to exactly 3/8" long; do same for second one. Now drill and tap 1/8" right through on both of them.

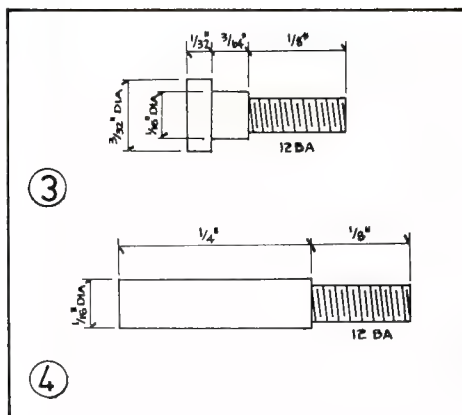
Assemble sideframes with spacers between

and screw up 1/8" RH screws in the leading and last axle holes. Try an axle in the remaining holes and adjust if necessary for any binding. Cut and file 3/8" strip to one piece 1/2" long, one piece to 1 1/8" long, one piece to 3/8" long, one piece to 3/16" long and one piece to 1 1/2" long. Place the above pieces in position as indicated in shaded areas of Fig. 2. Solder in place then remove spacers (accuracy is essential to ensure free running of wheels and axles).

Using a crankpin drilling jig as illustrated in AMRM Sept./Oct., 1975 drill all eight driving wheels, using a 1 mm diam. drill. Tap with 12 BA. For crankpin screws I used 3/32" diam. mild steel turned down to 12 BA diam. at one

Curve to suit running board under smoke box





end to a distance of about 1/8"; a small shoulder is made next to a diam. of 1/16" and a length of 3/64"; next the head of the screw about 1/32" long. Before parting off run the 12 BA thread up to the shoulder. Do same for 6 screws (see Fig. 3). The other two screws are different as they have no heads but have the shoulder 1/4" long (see Fig. 4). The extra length is used to take the connecting rod and valve rod eccentric.

When wheels are drilled for crankpin screws four of the wheels, 2 flanged and 2 flangeless, are to be made "non-insulated". This is achieved in a simple operation by drilling a fine hole between the wheel and the tyre, cutting the insulating member. A brass pin with a slight taper is driven into the hole firmly. Cut off excess brass pin, file flush with wheel on the inside and outside of it.

The next step is very important as any discrepancy will cause binding in the crankpins. Carefully set out on a piece of 1/32" brass sheet 1/8" wide the positions of the centres of the four axles, this being the set-out for the side rods. Cut two pieces and solder together. Drill holes 1/16" diam., file to shape as indicated in Data Sheet plan.

Assemble wheels and axles in the chassis making sure they are correctly quartered, with all insulated wheels on one side. Screw side rods in place and test for any binding and ease if necessary with a very fine round file. When satisfied it is now time to put the fluting on the side rods. Remove the rods. Cut 4 pieces of fine brass wire the length of the rods and solder along each edge of the rods. The space between the wire will fill with solder. Cut and file away where solder is over the holes in the rods; clean out holes free of solder. Then, with a very narrow bladed screwdriver scrape away solder between the wire, taking care not to scrape away next to the holes.

Remove the second (2nd) coupled wheel and axle set, insert the gear and reassemble. Secure worm to motor shaft, with motor in correct position gears and worm meshing properly mark fixing screw on the sloping section of the chassis, drill and tap 8 BA. Wire up power pack 12 volt DC and run to see if everything is OK and running satisfactorily. Add draw bar with screw completely insulated from chassis where the 3/8" flat section at the rear end of the chassis.

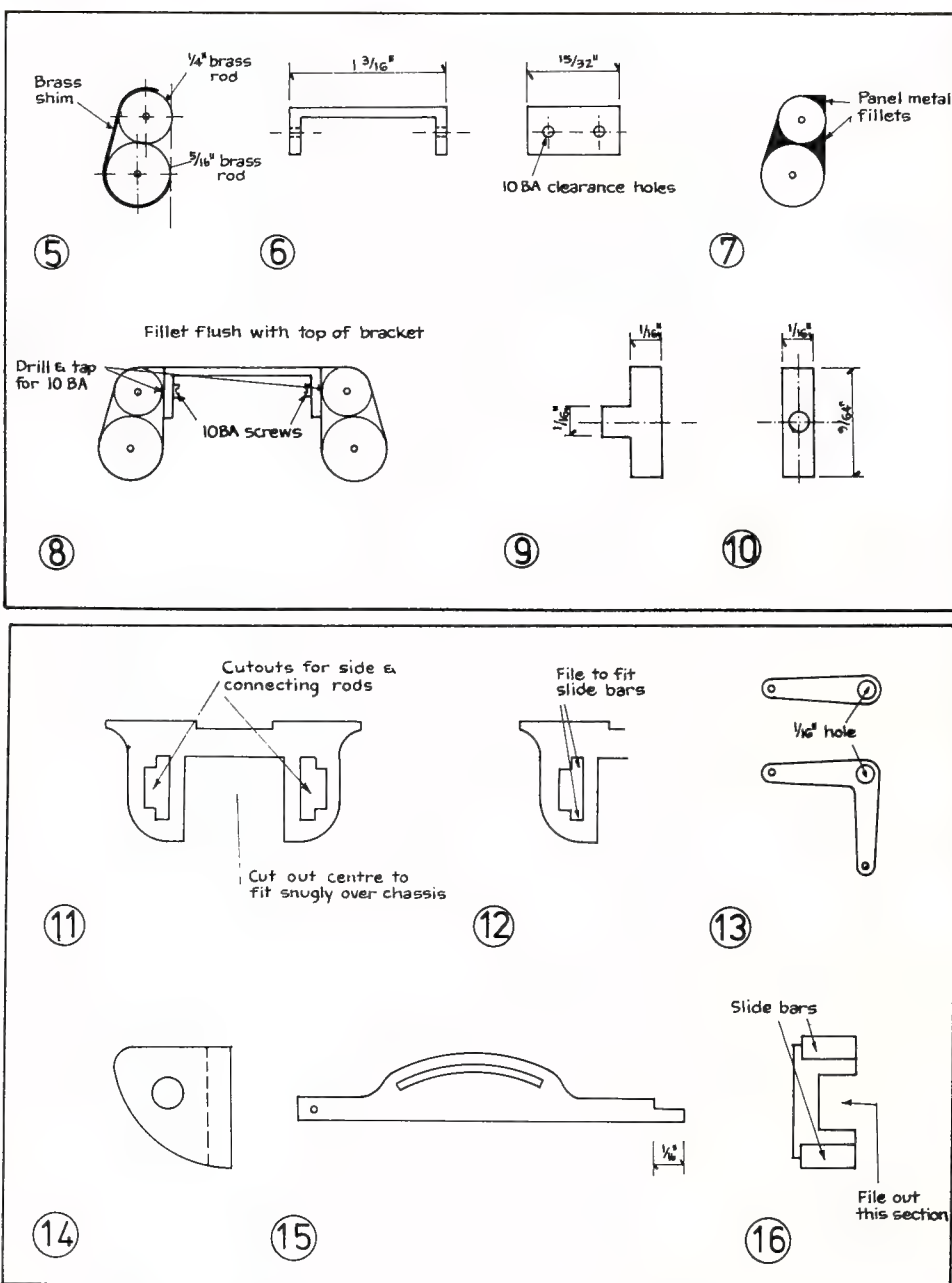
Cylinders and Valve Gear.

To make cylinders, etc. take a piece of 5/16" brass rod, place in lathe and drill 1/32" hole right through. Face one end square and open hole out to 1/16" diam. and 1/16" deep. Part off to a length of 15/32" long, do same for other cylinder, two all told.

Valve cylinders are made of 1/4" diam. brass rod. Drill .7 mm diam. same as for cylinders also open one end out to 1/16" diam. by 1/16" deep. The valve cylinders are also 15/32" long.

Now take a piece of shim brass .003 mm thick cut to a width of 15/32" and long enough to bend round the cylinder and valve cylinder on one side (see Fig. 5), solder the three pieces together keeping the two pieces of rod flush on one side (also see Fig. 5).

Now take a piece of 13/16" square brass section and cut it down to make a channel section cut to 15/32" long (see Fig. 6). Drill four holes 10 BA clearance as in Fig. 6. Fill in the hollow and top corner with panel metal or



similar substance. When dry and hard leave 24 hours. File the surface flat so that it is parallel to the centre line of the cylinder also square of the top so you have a square corner on the top inside (Fig. 7). With the section as indicated in Fig. 6 hold in position (Fig. 8). Mark and drill and tap for 10 BA screws.

Two bushes are made up as brackets at the back end of the cylinders by turning a piece of scrap brass rod 1/4" diam. down to 1/16" diam. by 1/16" long. Now part off to have a 1/16" shoulder, but before parting off bore 1/32" hole through the centre (Fig. 9). Now a little care is needed because we have to file the large end flat on both sides parallel to a width of 1/16" equidistant from the centre (i.e. 1/32" each side from the centre of the hole) — see Fig. 10. Also, file the slightly curved ends square to suit the distance between the slide bars VIZ 9/64" equal distance from the centre also see Fig. 10. Slide bars are made out of 1/16" x 1/32" brass section 7/8" long.

The slide bar support shape is best obtained from the plan (General Arrangement Plan Southern Valve Gear). It is cut from 1/32" sheet brass. All the associated members for the valve gear are obtained from the plan sizes and shapes of yokes, etc. Make the slide bar support for both sides in one piece (Fig. 11). When cutting out the holes for side and connecting rods file a little extra for the slide bars to fit into. It will be trial and error to make sure the bars are parallel (Fig. 12).

Place the cylinder assembly in the recess on the top of the chassis frame, centre up on frame, drill and tap two 8 BA C/S screws.

Next, mark position for slide bar support to fit into. Cut a piece of 1/16" brass to fit between the frames 1/2" long. Solder one end into the recess in the top edge of the bar support, making sure it is square both ways to the bar support. Place bar support in position, drill and tap for two 8 BA C/S screws. With slide bar bush (Fig. 10) and slide bars positioned check for parallel, etc. both ways then solder bars to support and to bushes, and bushes to cylinders. Trim any excess of slide bars at the bar support.

The valve rocker bracket is made up out of 3 pieces, size and shape taken from plan (see Fig. 13). 1/16" OD tube is used as a spacer; solder fine wire pegs into No. 75 holes, one hole in each piece. All three parts are soldered together with pegs on the outside. Two components are needed, one for each side.

The valve rocker support bracket is fabricated of brass bent into a "U" shape and filed to shape (see Fig. 14). Drill and tap 12 BA but, on the outside only on each one, open hole out to 12 BA clearance.

Valve rod slides are next made up. Take a piece of 1/8" brass rod, turn down one end to 1/16" diam. x 1/16" long, leave about 1/32" shoulder and turn remainder down to 3/32" diam. Cut off to 7/32". Drill .7 mm right through and open hole out to 1/16" to a depth of 7/32". File top section away down to the centre line hole. Make up two. Solder slides in position, then insert the valve rod and connect to valve rocker.

The reversing link bracket is made out of 1/32" brass sheet in one piece, shape and size

per plan, two are needed. Before cutting out, a little extra length is needed — about $\frac{1}{16}$ " will be sufficient. File extra length into a peg (see Fig. 15 — shaded portion) and drill $\frac{1}{32}$ " diam. hole where indicated. Cut a slot in the centre of item in Fig. 14 across the bottom of the "U", also a slot in the relevant of the slide-bar support. Solder all three pieces together. Where the $\frac{1}{32}$ " hole is drill another $\frac{1}{32}$ " hole into the frame — one on each side of the frame. Now, mark out and cut out the reversing links. Solder to $\frac{1}{32}$ " rod. The yokes are made up out of .015" brass sheet. Two pieces are cut to size and soldered together at one end only for a distance taken from plan. The other end is separated and bent to shape in the form of a "Y".

Make up the connecting rods (fluting as for side rods), crossheads, eccentric rods, etc.

The crossheads are cut out of $\frac{1}{8}$ " scrap sheet, filed to shape taken from either plan or Data Sheet. Now, file a rebate along the top and bottom edges so that it just slides between the bars. File out the centre to take the little end of connecting rod (see Fig. 16). Cut a piece of $\frac{1}{32}$ " sheet to shape of crosshead to be used as a backing plate; drill and tap for 12 BA. Solder piston rod in position on crosshead making sure it is clear of the connecting rod.

Now assemble all the relevant components. Insert crosshead and connecting rod in place with a thin washer between big end on connecting rod and side rod. Screw in the headless screws as previously mentioned. Place valve eccentric crank over the connecting rod with a thin washer between and a little clearance. Assemble eccentric rod to the yokes with rivets (made out of annealed brass pins). Solder eccentric crank to headless screw when in correct position; cut off excess; file flush.

The Locomotive Body

The smokebox is turned down in a lathe to a size of $27\frac{3}{32}$ " diam. Face one end for smokebox door. Mark the length of smokebox $27\frac{3}{32}$ ", turn down remainder to a snug fit to suit inside diameter of brass tube. Next, place tube in lathe and face one end square then solder together. Cut off tube to a combined length of $2\frac{7}{8}$ ". Scribe a line across the centre of diameter of smokebox end, square across and along the tube. The scribe line gives centre line of chimney, steam dome and for fixing firebox to same.

Cut a piece of .015" brass sheet to a width of $1\frac{5}{16}$ ", long enough to make up the firebox. Now, make up a hardwood former to the shape of the firebox, taken from the Data Sheet. Anneal the brass strip; scribe a line across the centre of the strip. Place strip and former in vyce, lining up. Scribe line with centre of the hardwood former and bend around the former. The concave section is made by gently tapping a round piece of dowel against the former. When one side is snugly against the former turn over and repeat for the other side.

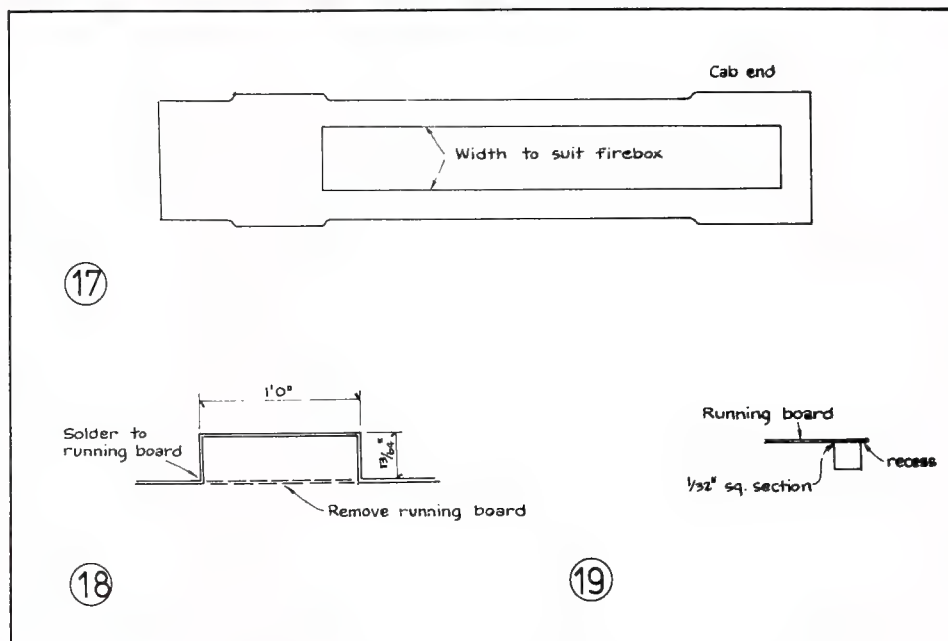
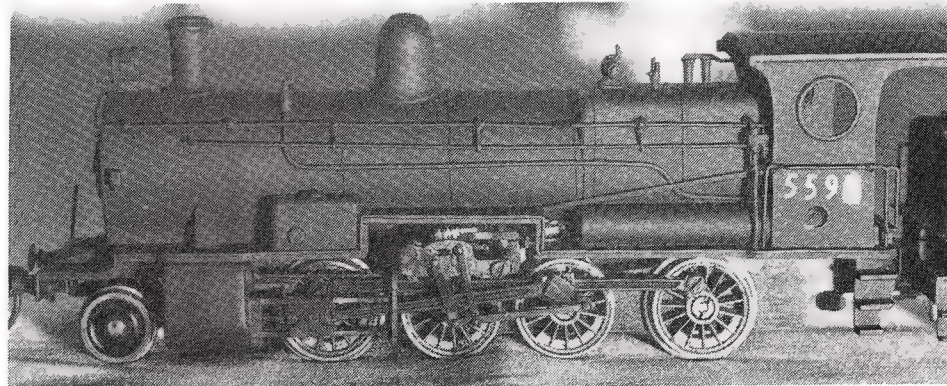
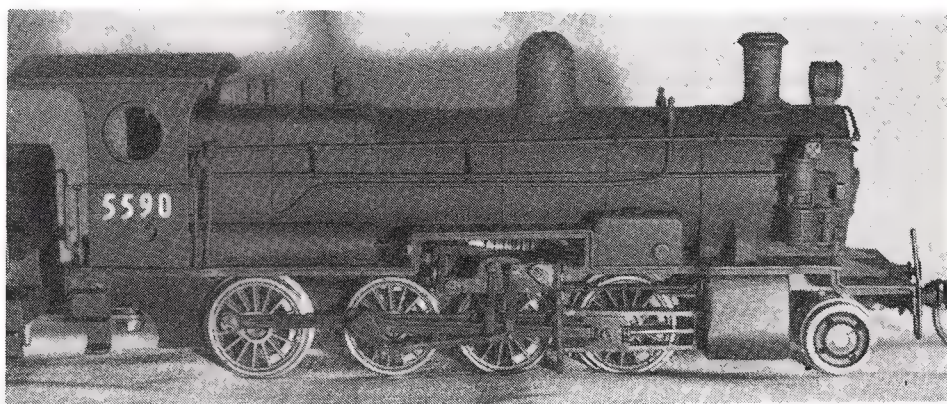
Cut a section of the boiler away on the opposite side to the scribed line to allow for the motor to fit. The length to be cut away is obtained by placing boiler on top of chassis marking giving sufficient clearance for the gear wheel and worm.

The front of the firebox is $2\frac{23}{32}$ " from front of smokebox. Lining up on the scribe lines with small straight edge tack with solder sides and top; recheck. If OK, solder. Now you will notice we have two triangular holes, one on each side at top. These are filled with a small piece of soft brass sheet cut to shape, with the straight sides slightly curved. They are then soldered in place. A little excess

D55 PLANS

Since this article was written, plans of the D55 have become available. DATA SHEETS have released a high quality H0 version which can be obtained from the usual outlets. Jack MacMicking of 247 Eastern Valley Way, Middle Cove 2068 has D55 plans in both H0 and 0 scales (7mm) priced at .80c and \$1.50 each plus postage.

Editor.



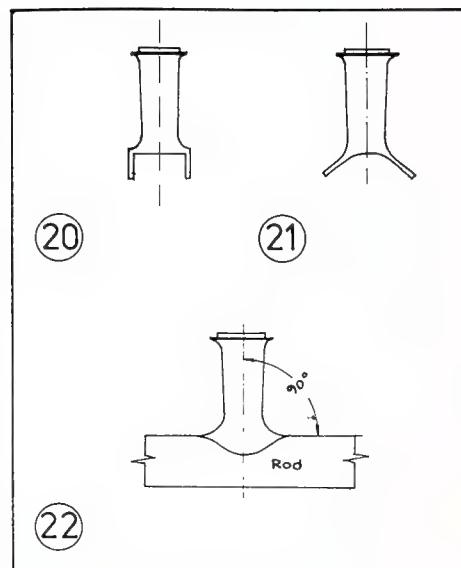
solder helps on the outside as it can be filed to suit the curve on the firebox across the top and down the side.

The running board is cut out of one piece of brass sheet .015" thick. Size is taken from the Data Sheet but where the cylinders protrude out the running board also protrudes over them with curved ends as is shown at the cab end.

The centre is cut out with a piercing saw (see Fig. 17). Next, set out where running board is raised above the valve gear. Mark position of slide bar support on Fig. 17 from Data Sheet, then mark a line 6" towards the front, then measure $7\frac{3}{4}$ " back towards the cab.

Make up two pieces as in Fig. 18. Width is $15\frac{5}{64}$ ". They are now soldered to the running board. Doing it this way does not give an inaccurate size. The section in original piece is now cut away and external corners filed smooth. A piece of $\frac{1}{32}$ " x $\frac{1}{32}$ " square section is bent to shape of the running board and soldered underneath with a very slight recess (see Fig. 19).

Mark and cut out spectacle plate, same



for cab sides also roof, all sizes from Data Sheet. Solder spectacle plate to firebox in correct position, square to top of box. Place boiler in position on running board, solder spectacle plate to running board, also tack smokebox to same in position. Cab sides are next fixed in position then cab roof is soldered in place making sure sides, etc. are nice and square. Sheet brass fillets are fitted around the bottom of smokebox on the front and sides. When soldered in place sides are filed to suit shape of smokebox front plate (see notes Data Sheet). Two triangular gussets are then cut and soldered to running board in front of smokebox.

Make up two sandboxes sizes on Data Sheet. They are fixed in position against the front end of the raised section of running board.

Two steam pipes are next fitted into position over the centre of cylinders. Some of the locomotives were fitted with slightly curved round pipes. Others had rectangular ones with a curved outer face. The rectangular ones are $7/32''$ high, $11/64''$ wide and $7/64''$ long. The side face is filed to shape of smokebox and running board.

The chimney is turned up in a lathe to correct shape and size taken from Data Sheet. The base of the chimney is turned down to approx. the diameter of the flange and about $3/32''$ long. While still in the lathe bore the base to a depth of $1/16''$ and walls to a thickness of $1/64''$ (Fig. 20). Anneal the chimney. When cold, using a very small ball-peen hammer, the very thin section at the base is very gently tapped outwards and nearly square to axis of chimney. (Reheat if necessary when turning the flange outwards) Fig. 21.

Next, using a piece of rod same diameter as smokebox with rod in a vice place chimney on the rod making sure it is square to line of rod (see Fig. 22). It is held in place with a very small G clamp. Then tap the flange down and around the rod to make sure the flange fits snugly around the rod. When satisfied, trim off excess to the correct diameter with a file. The steam dome is made exactly as for the chimney except the rod diameter is altered to suit the boiler diameter.

Cut shim brass to $1/32''$ wide strips for boiler casing bands. Solder in place with very hot iron. Use solder sparingly.

Make up two air cylinders out of $1/4''$ brass rod turned down to $7/32''$ diam. by $1 1/8''$ long and fix into position. Make up headlight out of $1/4''$ brass rod, turn down to $7/32''$ by $3/16''$ long. Bore out the inside about $3/32''$ deep leaving the wall thickness a little over $1/64''$.

Now for detailing. Fit and fix handrails, boiler feed lines, clack valves, steam generator, safety valves, whistle, reversing rod, marker lights and compressor — which is placed on the smokebox $5/16''$ back from the front. Glue with Araldite to smokebox door in place. The safety valves are turned in a lathe to size from Data Sheet with a thin piece of brass strip cut to shape and soldered in place on top of the valves.

The buffers are filled with solder and turned to the correct shape (see Fig. 27). Fix to front buffer beam with Araldite. Make up cab steps as per plan from brass, also front steps on the buffer beam.

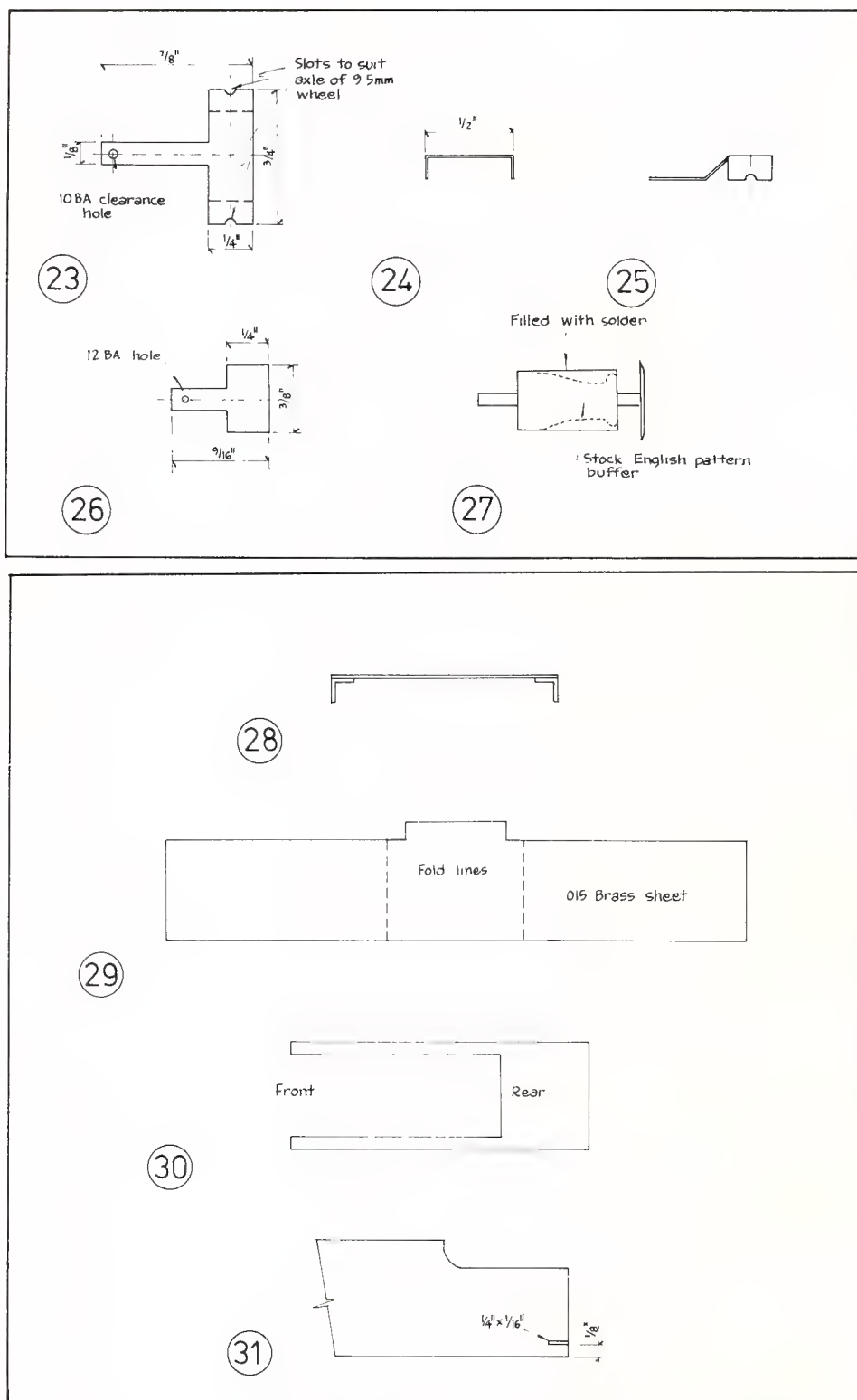
Fix body to chassis by means of three screws, two 12 BA at rear of cab and one 8 BA through $1/16''$ piece between frames in front of cylinders into the smokehouse.

Standard Goods Tender.

Cut a piece of .015" brass sheet to size of base of tender from plan making sure sides are straight and ends square. Take a piece of $5/32''$ x $5/32''$ brass angle, cut two pieces the length of the base, also two pieces for ends. Solder the angles flush with edges on all four sides (see Fig. 28).

When soldering the angles hold base and angles on a flat surface to stop the base warping. Next, cut the sides and ends out of one piece of brass sheet as per Fig. 29. Fold at right angles where the raised section is.

Mark and cut out the front of the tender, file square and true to shape also do likewise for rear section at end of coal bunker.



Mark and cut out the top section allowing for thickness of sides, end and front. File true to shape (see Fig. 30).

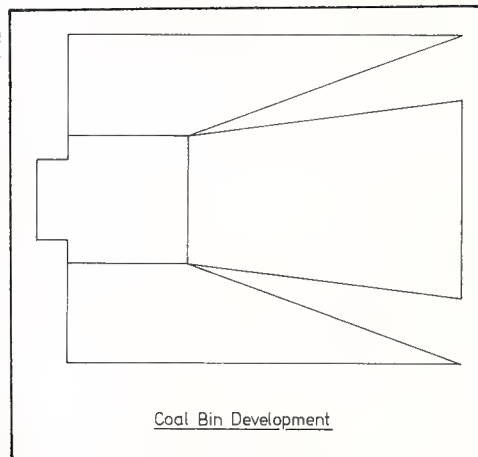
Now, from the plan mark and cut out the shape of the coal bunker. Fold to angles shown on plan. Solder the two long cuts together.

Mark the position of the front on the sides, solder square sides and front together, solder the top section into place, then fit the shovelling plate through the front which is made up with the coal bunker and solder to front and top section.

Mark out the coal bunker sides, cut and file to shape and solder in position; also rear section.

Cut to size and fix tender footplate.

The coal doors, front and rear, can now be cut out to size and soldered in place. Two gusset plates are shaped from plan and soldered inside the rear section either side of the rear doors in the coal bunker. A rear shovelling plate is cut and fixed. It is on a slight angle to the top of the tank. The plate is the width of



Continued on page 46.

THE 1978 AMRA EXHIBITION IN MELBOURNE

In 1977 I made the trek from Adelaide to see the Melbourne Exhibition for the first time and rated it the best I had seen. This year I repeated the journey but left a little disappointed. Possibly a second look at many exhibits has shown the bad as well as the good points. Because I was asked to write this screed after the visit was completed I did not take notes of particular layout names so, instead, I will give the impressions that lingered for a while in the memory.

Once again 'Wallan' impressed me with its realism when viewed from a distance. Until this layout was produced I had never seen an N scale display layout that operated realistically and looked as if it was designed instead of thrown together. Whether the same open space, true in nearly every detail appearance could be achieved within the limitations of an operating layout, is debatable. The sight of a T class diesel and a long string of fourwheelers slowly crawling through the broadgauge yard while a fast goods rattles by on the standard gauge line makes this layout really live as a display. If a spectator dared to challenge any of the detail, out came a fist full of photos including an aerial shot that gave the relative positions of all buildings. I was pleased to see that the black backdrop from 1977 ("ignore it... the scenery is flat for miles in each direction and we couldn't model all of Victoria's Northeast") had been replaced by blue sky.

I had heard previously about 'Malmsbury' and this HO scale model lived up to its reputation. The various buildings and bridge appeared complete in detail and the trains were operated realistically while I was nearby. The operating staff were in the centre of the

layout while another in the group was outside and could speak to the paying public. This is good to see occur as on other layouts some of the operators appeared lost in their own world and out of touch with the crowd. A Protfour group had a very simple but effective layout on display; however, as most spectators wouldn't know what P4 aims to do and the methods used, it would be helpful if a display could be arranged showing the difference in wheel flanges, wagon springing and point control. Otherwise at first glance it looks similar to Triang or Hornby with a repaint. Another VR style layout near Malmsbury caught my attention for a while but the other remaining exhibits suffered in comparison with the craftsmanship displayed on these four.

I realise that working an exhibition layout can be tiring in some circumstances and occasionally need to be livened up with a dose of the unexpected. (I've seen the excellent all NSWGR prototype 'Menangle' layout (in Sydney) graced with a Japanese Bullet train for this reason). However this does not excuse poor operation. At one of the large layouts I saw what I think was a two-car DERM set but, alas, it wasn't still long enough to get a reasonable look. Instead most of the time it went faster than a Bullet. To my eye trains look better when they accelerate gradually rather than as if thrown from a catapult. You don't need a super fantastic inertia throttle to do this, just a bit of concentration on what you are doing instead of watching the prettier members of the crowd go by. At Melbourne this catapult start appeared the rule rather than the exception.

The other major distraction was the view of the

hidden sidings. In British magazines I have read letters asking that the sidings be uncovered so that the spectator can see what goes on behind the painted background. Fine in theory but often not good in practice as was evident on many layouts. Bare unpainted boards with engines, rolling stock and tools littered around doesn't really complement a scenic layout. On one layout the sidings could only be seen from the ends so that the scenic display and fiddle yard were visually separated and this appears preferable.

Watching the crowd it was obvious that the kids' choice for most impressive was an O scale layout featuring high speeds, tight curves and spectacular crashes. Miraculously 'Casey Jones' rose from the ballast each time for another burst of neck snapping acceleration and other calamities. Actually it speaks volumes for the robust construction of Rivarossi equipment.

The biggest disappointment for me was the almost total lack of models in display cases. They don't need to be entries in a competition or even of excellent standard. A group of models with brief construction details can show the many facets of this hobby and give the viewer the feeling that perhaps he could do as well if he tried. Display layouts seem to require movement and the spectator is usually a metre or so away from a moving model so he doesn't really get any idea of how wagons are built, etc.

As I said at the start of this review I was disappointed this year; however, I believe the time was well spent and hope to attend next year.

Phil Curnow

1978 CHATSWOOD EXHIBITION

The Chatswood model railway exhibition is fast becoming the prime exhibition for Australian prototype layouts in Sydney and this was a feature in 1978, for the Australian theme overshadowed all others. In all there were five Australian layouts, many on show for the first time. Among them was the Menangle layout, by the Model Workshops group, much already having been written upon this layout. AMRA NSW Branch exhibited 'Tickhole Tunnel' a continuous layout based on the well-known area in the Newcastle area, being 20' x 10' in size. Peter Moses, with a little help from his friends displayed a 16' x 10' layout based on the NSW western junction station of Blayney, the layout being hurriedly built for the exhibition. Narwood Hills Model Railway Club exhibited a 35' x 12' layout of Hurstville, covering a period from 1920 to 1960, a rather lengthy period. The North Shore Model Railway Association displayed a point to point layout, Bullamacanka, said to be typical of a country terminus. The innovation here was for an operator to describe to the public various aspects of train operation; however the continual twiddle that emitted tended to cover too much, and as such became overbearing.

Overall the detail on the layouts was good,

especially the golfers on Bullamacanka. Many of the layouts were obviously incomplete but all made some contribution to a good display. It would be incorrect to overpraise the layouts for all were disappointing in operation, for any resemblance to the prototype and the operation on the layouts was merely an accident. It is disappointing to see vintage engines coupled to modern stock and vice-versa. The layouts set the scene, and the operation spoilt it all. Obviously self discipline will have to be applied for a model layout to operate as a model of a layout instead of a toy train system. The Menangle layout was awarded the Best NSW Prototype award and best NSW Prototype Club layout.

Despite the Australian based layouts the remaining layouts were top class, especially the three American-style layouts by Viv Farrow, Bruce Lovett and Prospect Model Railway Club. Viv Farrow's 15' x 10' display depicted a coal line railroad and has some superb scenery, the trains all operating smoothly.

The scenery was also the feature on Bruce Lovett's layout, especially the realistic waterfall. The might of the 26' x 10' Prospect Model Railway Club was its feature as lengthy trains slowly traversed through

the township. Also on show was a display of 3mm scale gear which was hopefully the beginning of the re-emergence of this scale to popularity. The award for the best non-NSW layout was won by Bruce Lovett, while the best non-NSW club layout was awarded to Prospect Model Railway Club. The judges were Graham Ahern, John Hole and Ken Edwards.

The commercial side of the hobby was well represented by Bill Webb and Punchbowl Hobbies while FSM gave the public a closer look at their products and TC Railmodels displayed the range of Workshop 5 Model kits, for which they are now distributors.

Overall the exhibition was of exceptionally high standard, particularly with the lighting and display attached to each exhibit. There is little doubt that the organisers can be pleased but for 1979 they will have to strive for a more powerful power supply, for the continual interruption to the electricity supply, causing the layouts to fail, is not only disappointing to the paying public but frustrating to the layout operators.

Bob Gallagher

BRISBANE EXHIBITION 1978

Over the holiday weekend of April 29-May 1, 1978 Brisbane had its first model railway exhibition. It was held in the Police and Citizens Youth Club hall at Milton and was presented by both the Australian Model Railway Association (Queensland Branch) and radio station 4BC.

In all there were 20 stands, and their particulars are as follows:-

1. Information. Staffed by members of the AMRA who always appeared keen to answer those awkward questions. Had on sale the Association's magazine "Journal" as well as back issues of AMRM.
2. Australian Narrow Gauge Railway Museum Society. Relics and photographs of narrow gauge steam in the Queensland canefields. Assorted other narrow gauge goodies were also on sale.
3. Australian Railway Historical Society. A branch in every state and well known by enthusiasts and modellers alike. Quite a lot of good books, etc, not only relating to Queensland but other states also.
4. Australian Model Railway Association. An HO scale layout in the making, showing the fundamentals of what goes into the construction. From baseboard to complete layout in 3 days. Quite a crowd gatherer.
5. W. Oliver. British tramcar layout modelled in 3/4" = 1" scale. No bell-codes on this one though!
6. Southside N Scale Club. A large layout of American prototype made up of modules constructed by individual members on the "N-Trak" principle. This is a relatively new innovation which allows many variations to a layout's size, shape and style.

We will have more to say on this in the next issue.

7. N. Cannon. Three track N scale layout featuring trains from a number of countries. This layout was made from commercially available components and scenic materials, etc, and would rate highly among layouts similarly constructed.
8. D. Willis. A smaller N scale system demonstrating what can be achieved in a small space.
9. Model and Hobby Repairs. A commercial hobby shop which not only carries a good range of well known brands but offers a repair service too.
10. Northside Railway and Tramway Club. A small HO tramway layout with a good assortment of cars from European and American tramway systems.
11. R. Simpson. HO railway with country town and station.
12. P. Kelly. The "Black Stump" with grades too steep and curves too sharp but the "Flying Banana" takes them just the same! A gimmick layout which is ridiculous enough to get you in.
13. P. Kelly. HO layout with open country setting. The "brass" garratt caused quite a bit of comment.
14. Applience Service Co. Display of Marklin equipment, from Z to O.
15. Australian Model Railway Association. This large exhibition layout has been around for a few years now but still captures the interest of the public. Its double gauge (standard on the top level and narrow on the lower) gives the opportunity to run quite a bit of equipment applicable to both NSW and Qld. Some interesting scratch-built models were operating on this layout.

16. S. Malone. A small (6' x 2') Sn3½ scale layout of a Queensland loco depot, with handbuilt models. Plenty of shunting of the 8 locos on this layout. Was quite an interesting layout for the enthusiast type modeller. The method employed to make the coal wagon climb and then descend the coal stage had everyone wondering for a while. We hope to be able to feature this layout in a future issue.
17. Bill Webb. Mail order specialist from the Wollongong (NSW) area — as well as advertiser in this mag — featured a good display of Fleischmann, Vollmer, HAG, Seuth, etc. Bill must have covered just about every exhibition over the past 12 months.
18. Union Pacific Model Railway Club. An American prototype layout with splendid scenery and continual action from good quality locos (many brass) and stock. An exceptionally fine layout this one.
19. Canteen. For that well deserved cuppa. Yes it was a warm weekend, at least to us Sydneysiders it was!
20. St John's Ambulance attendant. The most animated of all stands.

For a "first" exhibition I feel that it came up to scratch admirably. There was plenty of layouts, all of which provided continuous operation. The general public appeared pleased, as was noted by their comments recorded at the exit gate.

Congratulations must go to the organisers for putting on quite a good display. With what was learned from this year's one, next year's will undoubtedly be better still.

Allan Brown



5603 heads a goods consist. Note the outside bearing pony truck, "Alligator" crosshead and "Turret" tender. Photo N. Thorpe collection.

'K' Class Locomotives of the N.S.W.G.R.

A coverage of the N.S.W.G.R. (D55) K class goods locomotive.

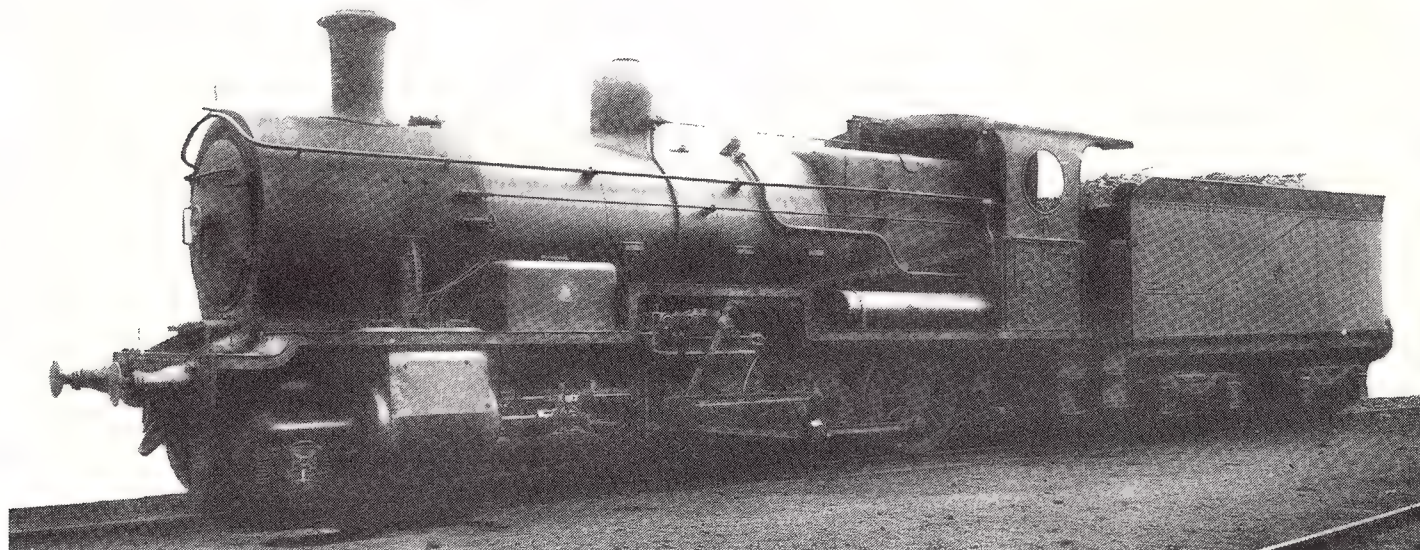
In 1896 the Beyer Peacock Company delivered the first five of the new "Australian Consolidation" (2-8-0) type heavy goods locomotive to the NSW. The locomotives were classified as the Class T(524) later to be changed to (D) 50 in the 1924 re-classification. Delivery ceased in June 1916 after 280 locomotives had been built and delivered. It is interesting to note that the Commonwealth Railways ordered and received eight similar locomotives from the North British Co. These were delivered in 1916 and numbered K27-34. A further 10 locomotives, under construction for the NSW, were seconded into the British Rail Operating Division (ROD) during World War I. These

locomotives saw service in France and were numbered 701-10; they later became the property of the Belgian Railways at the end of the war. The South Maitland Railways' (then East Greta Railway) 10 class, 2-8-2 tank locomotive, was also based on the (D) 50 design.

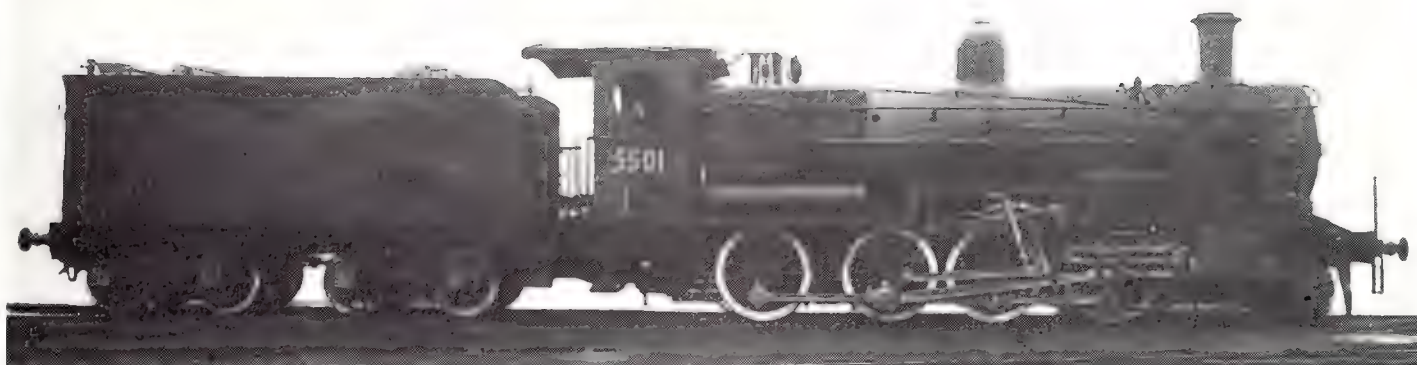
The success of the T class locomotives led to further development of the design and the first TF(939) Class was built by Clyde Engineering Co. in 1912, when only 206 of the T Class had been delivered. The TF Class differed, visually, by a higher running board, extended smoke box and tapered boiler. By 1917 190 units had been built and put into service. The Commonwealth Railways ordered 26 similar

locomotives, delivered between 1918 and 1920, for use on the Trans-Australia line.

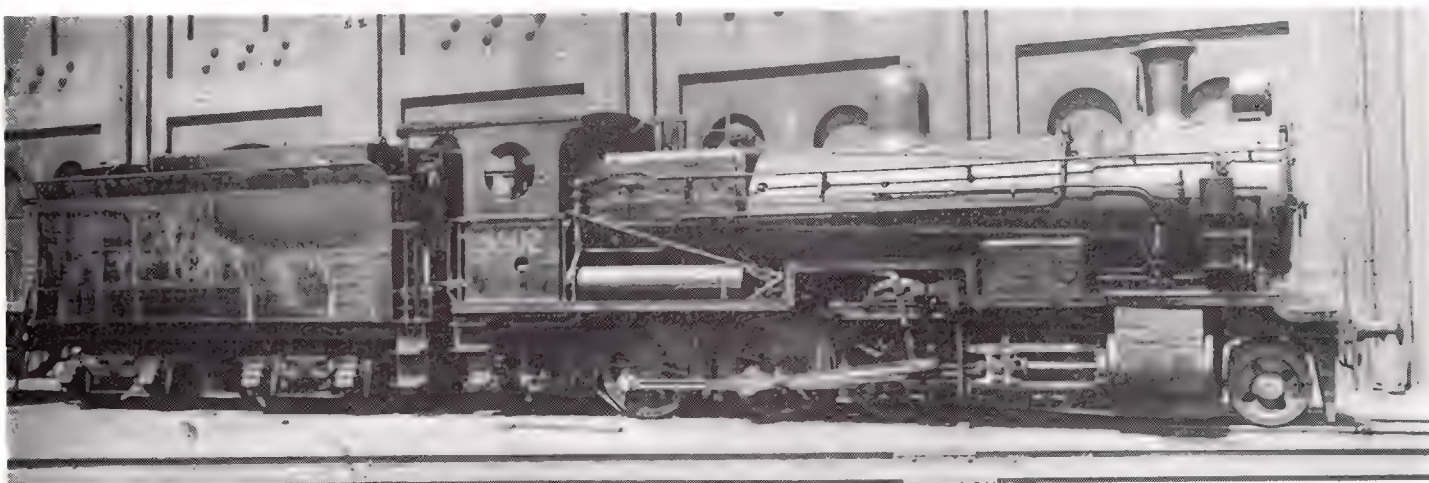
In 1918 a further development of the T and TF Classes, known as the K(1353) Class, was introduced to the NSW. Eventually 120 locomotives were built by the Clyde Engineering Co., the last locomotive entered service in 1925. It is interesting to note that although the class entered service as the K(1353) Class, the last 18 locomotives, 5603-20, entered service as the (D)55 Class. The remainder of the class were re-classified to the (D)55 Class and numbered (D)5501 to (D)5602. As introduced the locomotive numbers were 1353 to 1454.



K(1353) with tapered boiler, "Alligator" crosshead and outside bearing pony truck. NSWPTC photo.



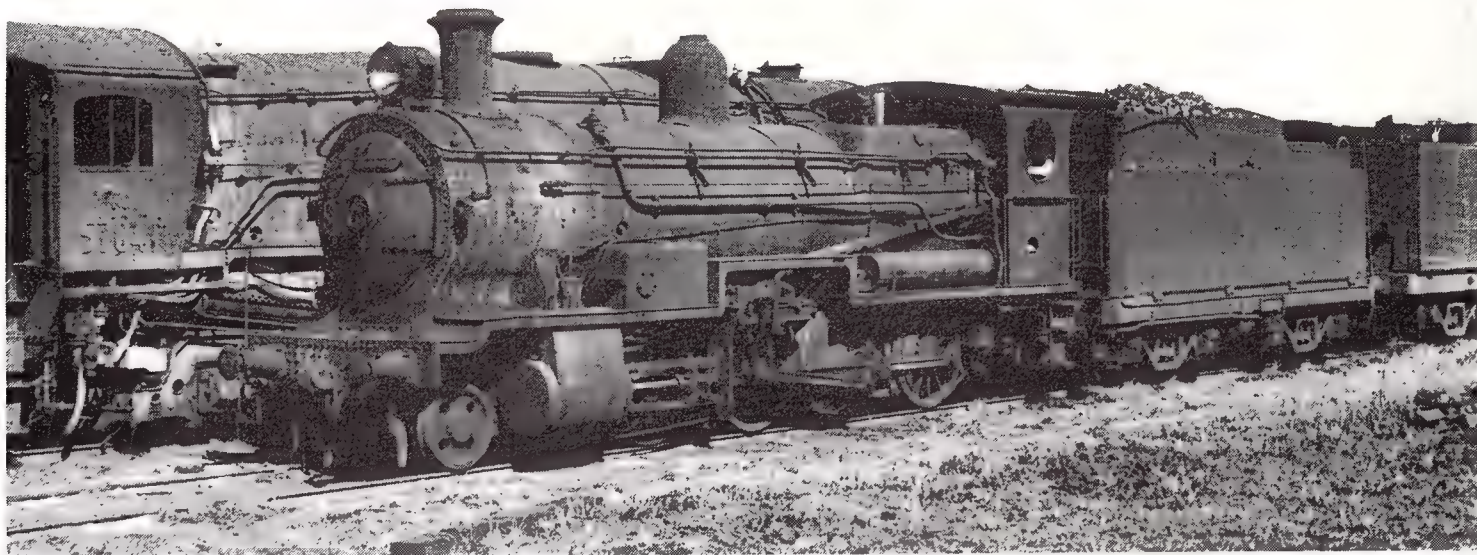
5501 equipped with "Laird" crosshead and outside bearing pony truck after re-boiling. NSWPTC photo.



The "Oily K", 5502 equipped for oil burning. Note the oil bunker and the flap hinged on the rim of the funnel. An "Alligator" crosshead is fitted, as is a standard pony truck. NSWPTC photo.



5501 with outside bearing pony truck, "Laird" crosshead and "Wampu" tender heads a goods train. Note the omission of a headlight. Noei Thorpe photo.



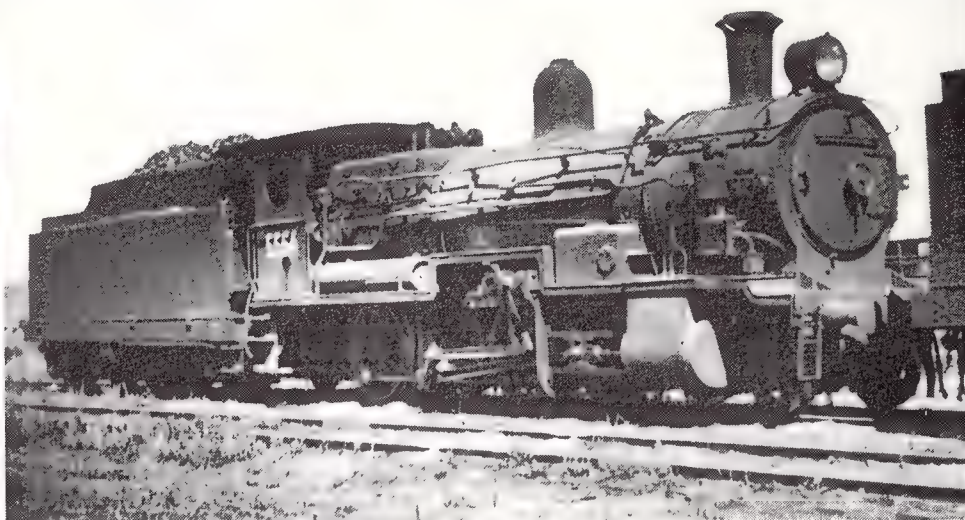
5616 was an active locomotive when photographed at Goulburn by Leon Oberg in September 1962. Alongside is a withdrawn Mountain-type No. 5704.



D55 class cab side. Leon Oberg photo.

The K was similar to the TF in that it had a higher running board than the T class; it also had an extended smoke box and tapered boiler. A further variation (from the T/TF Class) was the Southern valve gear which necessitated a large step in the running board. The last 30 locomotives placed in service, 5591 to 5620, had cast pony trucks which, visually, showed outside bearings on the leading pony wheel. These pony trucks were later added to other units of the class. Another variation involved the crossheads; some were changed to the "Laird" style, while the others retained the "Alligator" crosshead. Some which had the "Laird" crosshead were 5501, 5503, 5565, 5581, 5586, 5599 and 5620. As built the class were fitted with the "Wampu" tender.

During the mid 1930's the class fell due for re-boiling and were equipped with standard superheated boilers. The standard boiler was straight and, so, differed from the tapered boiler that had previously been fitted. The new boilers had also been fitted to the T/TF Classes and, as a result, the T/TF and K Classes became known as "Standard Goods Locomotives". These locomotives were rated, basically, for identical loads and conditions. Some of the K Class were later equipped with the standard "Turret" tender. These tenders had increased water and coal capacity and, so, gave the engines a greater range. The new tenders also gave the crews better visibility.



5554 as it appeared (heavily weathered) in October 1958, a little over a year before it was withdrawn from traffic. Leon Oberg photograph.



The Harden to Cowra section was one of the final stamping grounds for the D55 class and pictured shunting at Young on July 13, 1964 is 5597. Leon Oberg photo.

In September 1946, 5502 was fitted for oil burning and proved successful. This success led to the conversion of a further 14 locomotives. The locomotives were 5506, 5519, 5522, 5525, 5530, 5535, 5537, 5541, 5571, 5574,

5579, 5581, 5611 and 5620. In 1949, in response to the crippling coal strike, another fifty five locomotives were converted to oil firing; the units were 5504-5, 5510-14, 5520-21, 5524, 5526, 5528, 5531-32, 5536-37, 5543-



5593 leaves Goulburn North box with No. 78 pick-up in tow on November 24, 1962. This regular Goulburn to Sydney pick-up was a regular D55 class roster until the early 1960s. Photo by Leon Oberg.



The (bufferless) front end view of 5619. Leon Oberg photo.

44, 5548, 5551-57, 5560, 5562-64, 5567, 5569-70, 5572-73, 5575-76, 5580, 5582, 5584, 5586-88, 5591, 5593, 5598-5600, 5602, 5604, 5609, 5612, 5614-15, 5617-18.

At the end of the strike fifteen locomotives were re-converted to coal firing and, as an insurance against another strike, many oil fired locomotives were placed in store at city and country depots. Dieselisation saw the scrapping of these locomotives between 1955 and 1956. The locomotives converted back to coal were 5544, 5554, 5593, 5598-99, 5602, 5604, 5609, 5611-12, 5614, 5617-18 and 5620. The conversions took place between 5.5.1955 and 28.7.1956.

The visual appearance of the oil burning (D)55 differed from the coal burning (D)55. The coal chute, in the tender, was used to hold a rivetted oil tank, a flap was hinged on the funnel and a light was fitted to the top of the funnel so that the colour of the exhaust could be observed at night for adjustment of the burners.

The (D)55, (K Class), were used for hauling goods but, as they were a little heavier than the T class, were restricted from some branch lines. In 1949 the Locomotive Allotment List showed that Enfield had 80 locomotives on the list including oil and coal fired locomotives; Goulburn had 23; Cowra had 8 and 8 locomotives

were being repaired. Locomotives 5531 and 5605 were fitted with balanced coupled wheels for express fruit working. They also worked the Cooma Mail between Goulburn and Cooma.

The success of the diesel electric locomotives saw the demise of steam and the first (D)55 Class locomotive, 5518, was put into storage in 1951; by the end of 1957 only 46 locomotives remained. The last locomotive in service was 5597 which was withdrawn in 1967; 5595 is preserved at the NSW Rail Transport Museum at Thirlmere.

Notes compiled by Bob Gallagher

Acknowledgements: For assistance in preparing these notes, Stuart Livesey, Graham Ahern, Ian Thorpe, Noel Thorpe, Neil Graham, Leon Oberg and Bob Merchant.

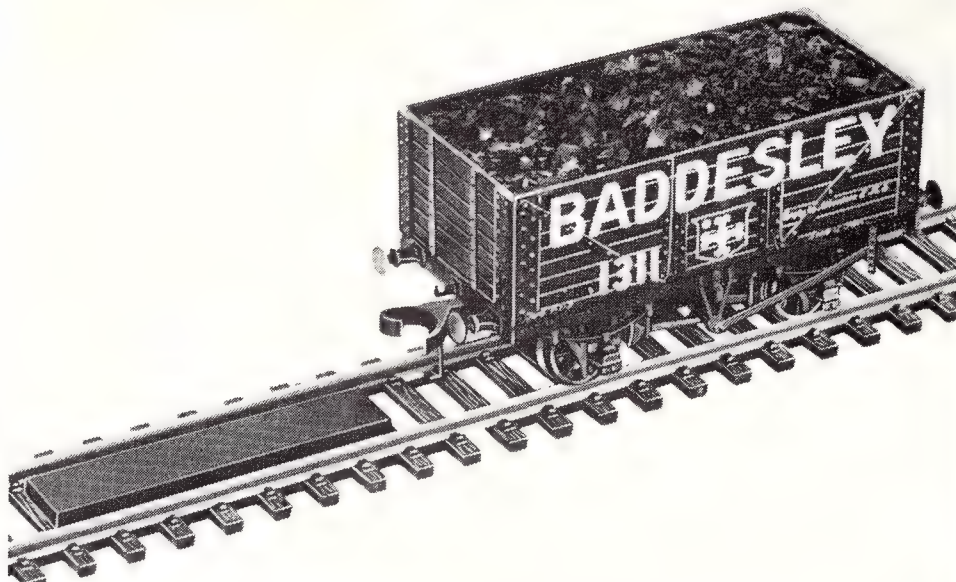
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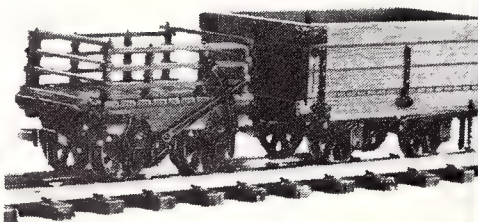
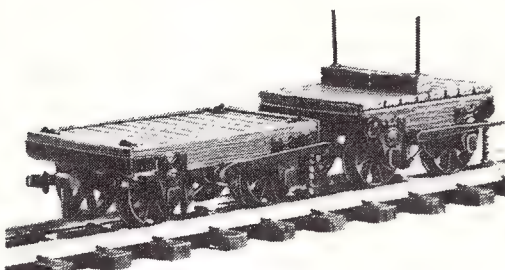
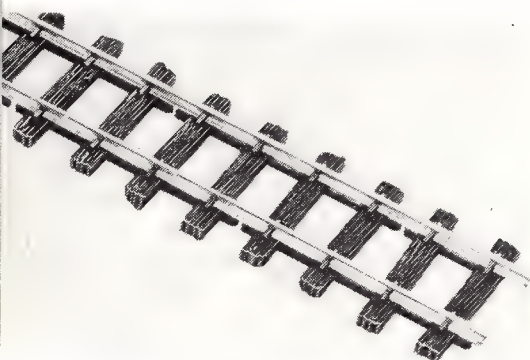
5593 lopes along with a load of superphosphate and general freight near Weari in this September 22, 1962 scene. Photo by Leon Oberg.

NUREMBURG TOY FAIR

Each year most new products in the toy and hobby field are displayed at the Nuremberg, and many Australian importers can be found at the fair, looking for new products for the hobbyshop shelves. Usually we in Australia have to await coverage by overseas magazines to learn of new lines, but this year the Pritchard Patent Product Co sent AMRM some illustrations of their products, which no doubt will be advertised in AMRM when they become available in Australia. Some of the PECO releases are as follows.



A feature of the PECO releases was the new magnetic type coupler. The above photo illustrates the new magnetic coupler, which will still couple with existing PECO couplers and the between the rails magnet. The coupler system has delayed magnetic action, where the system can be used to push a vehicle to a designated spot some distance from uncoupler.



The 0 scale narrow gauge modeller is being catered for with a flexible 16.5mm gauge track system with correct size and detailed sleepers. Welsh narrow gauge wagons are included in the range and include the four wheeled flat deck and bolsted wagons for slate traffic. The stake and open wagon are further samples of the white metal kits in 0-15.5 gauge.

THE BUILDING OF A KATIE

Continued from page 40.

the rear doors.

The water filler hatch is made up out of a piece of tube with flattened sides. The top is cut to size from the plan. If the tube is slightly larger than the top file the tube down so that it is slightly smaller all round than the top piece. Solder both pieces in position on the top of the tank.

Make up the steps as per plan from scrap brass .015" and solder in place, also the rear

ladder cut to length out of stock ladder material with the sides filed a little narrower. Solder in place.

Before assembly, a piece of 1/32" brass sheet is cut to the size of the inside measurements of the tender sides and soldered to the base, with equal distances on each side so that the tender sides and angle on the base is flush. Take two pieces of 1/16" brass 1/4" wide cut to the inside measurements of the top, solder 1/8" up from the bottom at either side (see Fig. 31).

Make up two brass bolsters 3/8" diam. and a height to suit your bogies; drill and tap 8 BA. Solder in place on the bogie centres.

Bogies used were the Central Valley roller bearing type. These are not the correct style but the skirt on the tender hides the obvious

incorrect area. The Central Valley brand are earthed on one side, which is utilised for the tender pick-up, ensuring that the insulated side is on the opposite rail to the insulated wheels on the locomotive.

Assemble top section and base together. Drill and tap four (4) 10 BA holes through the 1/16" x 1/4" brass in Fig. 4. Best position is close to the end of each piece. Fasten with 1/4" x 10 BA screws.

The two buffers are made up as previously described in the Loco section. Fix with Araldite.

Make up drawbar pin and solder in position. Detailing can be finished — handrails, hand-brake wheel, marker lights, locker doors, etc.

When all detailing, etc. is finished the loco and tender can be painted and numbering done.

NSWR

Continued from page 33.

brands.

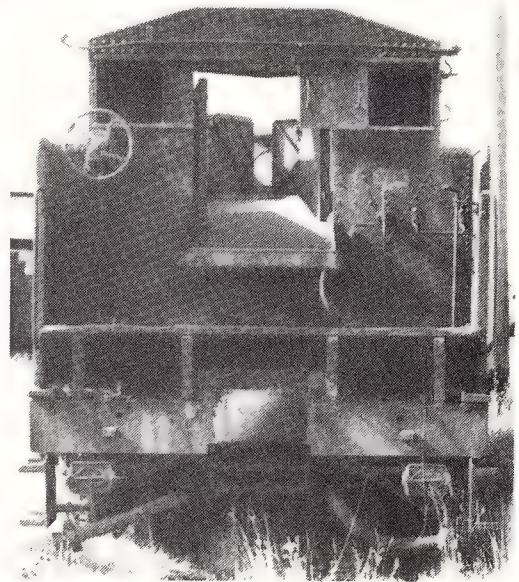
The layout is at present out of service for extensive attention to wiring, trackwork and scenery. When mixing the plaster for scenery too much colored dry powder was used in places in an effort to eliminate those stark white spots that show when the surface is chipped. The powder has caused the plaster to break away and crumble. The commercial lichen used on the trees and not treated in the first instance has created an after bushfire look in places. Locos, too need re-gearing after 20 years solid service so with those chores under way, all operation has ceased for some time ahead, unfortunately.

The world is full of willing people. Some are willing to work and others are willing to let them.

NSWGR STANDARD TURRETT TENDER.

Continued from page 36.

The Turret tender was a post war (W.W. II) introduction to the Government railway system of New South Wales. The tenders were bigger than the existing tenders on the standard goods locomotives, and the larger water and coal capacity was to provide the goods loco with a larger operating range between servicing. Each unit had its own serial number but assumed the locomotive number when attached (coupled) with the respective unit.



by John Bevan

Many modellers have come to rather than just pick a general layout plan based on no particular prototype that there is great satisfaction in modelling a selected section of a railway. This trend is noticeable among the local layouts seen at exhibitions such as the Menangle and Junee layouts. Many modellers, however have trouble in adapting their selected railway to a layout. The book that I have selected to review can help the modeller. The book is Kalmbach's "Railroads you can model".

This book is in the usual Kalmbach format having large pages with many photos. The nine railroads covered are each described and a possible adaption to a model shown. Each of the chapters was originally an article in "Model Railroader" magazine expanded and adapted into a consistent style.

The first railroad described is the New York, Ontario, and Western, which ceased operations in 1957. This railroad ran from nowhere to nowhere through rough country and never prospered. The model proposed is a large single tracked rural line including many of the features of the N.Y.O. & W. The next railroad is the Duluth, Missabe, & Iron Range. This railroad was a large iron ore carrier. The model idea includes a combined ore dock and mine separated by a backdrop so that two contra-rotating train journeys, one of loaded wagons and one of empty wagons can be made. This idea could be adapted to a coal line (Newcastle), an ore railway (Hammersley or Newman) or a similar scheme.

The next railroad is the Wabash Columbia branch, which is in its essentials so similar to many local branch lines. Here the model track plan consists of only the three main stations

on the branch to be connected in what ever manner the modeller desires. The Aberdeen and Rockfish contains many ideas for the inclusion of industries on a small layout as does the next layout based on the "Champagne Trail", the Bath and Hammondsport which is a 20 kilometre long line which exists to move a commodity close to my heart — wine. The suggested layout is a shelf type including most of the features of the line and its wineries.

The Virginia and Truckee was a mountain railroad in the west which was originally built to serve the Virginia City silver mines. The railroad was noted until its closure in 1950 for its ancient equipment and steam locomotives. Again here an idea of how to selectively compress the features of the prototype into a layout is given without showing how to fit into a particular room. The G.M. & O. "doodlebug line" was operated by gas-electric railcars which can inspire the Australian modeller into modelling a branch line which is operated by railmotors or the like. The St Johnsbury and Lamoille County operates in Vermont in very cold snowy territory including covered wooden bridges. It is modelled in a simple uncluttered way preserving the rustic atmosphere of the line.

The final line modelled is the Southern Pacific's Tehachapi loop. Here the suggestion is that such a model is better than a show case for the display of big models. The idea of this model can be used to model the Bethungra spiral and provide an impressive scene for the display of your scratch built locomotives.

In total this book is of great use to the Australian modeller not because it shows how to model a local railway but because it shows how easy the adaption of an idea to a layout really is.

"Railroads you can model" Edited by Mike Schafer. Published by Kalmbach Publishing Co Milwaukee U.S.A. ISBN 0-89024-526-6. Retail price about \$41.5. My copy from the Fantastic Hobbyshop, 42 Park St, Sydney.

worth seeing, and that includes all layout and exhibit operators.

If all goes according to plan, the NSW Branch of AMRA will be presenting the annual Labor Day weekend exhibition at the Sydney Showgrounds. The complaints of the smelly, stuffy and overcrowded Town Hall will be no more, for the Westco Hall at the Showgrounds is a far brighter venue. In all fairness to the NSW Branch of AMRA they have received more than their fair share of criticism over the Town Hall exhibition, for the lack of space nor environment was controllable in 1977. Like many Government Institutions the Sydney Council are rather tardy in relaying foreseeable problems to their regular clients. With the passing of the exhibition at the Town Hall, how will the October exhibition be related in 'bull sessions' for to date 'THE' exhibition has been at the Town Hall, every one knows that model rail enthusiasts or not. The exhibition has been so regular on the same weekend at the same site that it is virtually an institution, and they are not easy to move.

Horseboxes and Old Wagons

This issue sees the commencement of the SAR horsebox series and interested readers may note a hint of despair by the author, Phil Curow, in his opening remarks which relate to how he was trapped into the task of researching SAR horseboxes. The circumstances which arose after Phil's request for a NSWRR 'KKG' photo drew to our attention the relatively poor position of historical records, especially with goods wagons. With the 'KKG' a good photo was not readily available, although the class had only just been withdrawn. Although there are numerous preservation and historical societies in existence, none seem to place much emphasis upon wagon research and, with AMRM, a class of vehicles would be selected for coverage only at the whim of a budding author. As modellers of Australian prototype will need, in the future, some accurate details of goods wagons we at AMRM decided to change our hap-hazard method of selecting vehicles for coverage and implemented a programme of organised selection, with emphasis placed upon withdrawn or soon to be withdrawn stock. To help accurately record these details many experienced enthusiasts have been requested to assist the sections of AMRM staff working on the programme. Fortunately we have been relatively successful and the Horsebox series along with the elephant wagons, is the evidence of 3 years research. So Phil's hint of despair has been an important factor in the encouragement for goods wagon research and coverage, and the future has many goodies in store for readers, which include milk tankers, flat wagons and stock vans.

WHX POSTSCRIPT

Some Further Notes on the N.S.W.P.T.C.'s Intermediate Series of Aluminium Grain Hopper Wagons.

The 'Prototype Plan' wagon feature in the March/April 1978 A.M.R.M. dealt with the WHX bogie hopper wagons operated by the N.S.W. Public Transport Commission. In passing, mention was made of WHX cars being recoded to the WH class. The following notes cover this matter, as well as other features of the WHX design.

Recoded Vehicles

To date, 30 cars have been reclassified from WHX to WH. The vehicles affected, all drawn from the first WHX group, are nos. 30552, 30555, 30566, 30567, 30569, 30571, 30573, 30575, 30578, 30579, 30580, 30582, 30583, 30584, 30586—30592 inclusive, 30594, 30594, 30595, 30596, 30598, 30604, 30605, 30611, 30667 and 30668. Externally, the most noticeable change in the appearance of the modified vehicles is the covering of the 'X' in the code by black paint. The 30 affected WHX cars were treated between December 1976 and August 1977.

Bogies

The standard bogie applied to the first series of WHX car (nos. 30551 — 30668) is the XCG type, the running gear fitted to the second series units being of the XCL type. In many instances, modified WHX units have received 2CH type bogies, although at least one wagon, 30611, still rolls on its original style of bogie.

Wagon Identification Markings

The first series of WHX vehicles had black lettering, numbers and symbols applied to the unpainted bodywork. After a decade of use, the wagons have accumulated sufficient grime so as to render this policy useless. Consequently white markings are now appearing on these cars.

The second series of WHX cars had the relevant information marked out in black on a white background. This style can be seen in the illustration of car 30752.

WHX Wagons with 'R' Logo

Most, if not all, of the WHX cars in the 30669 — 30768 group appear to have received the 'R' logo. The photograph of WHX.30752 shows the position of the symbol. The 'Manildra' hoppers were also in possession of the logo prior to their assignment to special duties.

'Manildra' WHX Wagons

A further vehicle assigned to these tasks has been located: WHX.30717.

Compiled by Paul Rogers

AMRM NEWS.

Continued from page 35.

beginner, the arm chair modeller and the rivet counter, in all from every arena of the model railway hobby.

WHX Plan — Last Issue

Unfortunately a few mistakes crept into the NSWPTC plan in last issue. Readers will note that there were two dimensions lettered for each major measurement. One was an imperial dimension and the other metric. Unfortunately the metric dimension was a HO scale dimension, and an inaccurate one at that, and should not be used, the Imperial dimension being the more accurate one. We apologise for any inconvenience we have caused.

HELP . . . Assistance Needed

Once again we seek help from a reader so that we can complete a half finished project. It is essential that the willing reader either live in or often visit Shepparton in Victoria. The project is relatively simple needing, at the most, a few hours. Please contact AMRM Editor as soon as possible.

Readers Complaints . . . are they genuine?

This question must now be asked, for in recent months, some readers have written to us indicating a problem that has been all or partially caused through AMRM action. In turn each reader has been contacted for more detail on the matter but in every instance we have heard no more from the reader. It does suggest that the readers were complaining without any definite reason. Oh well, at least AMRM is serving a purpose in one area.

Exhibitions . . . Too many at once!

A quick look at the Exhibition listing this issue will show that the Queens Birthday Weekend in Sydney will be a boon for model railroaders, or will it? There are three exhibitions, within 20 miles over the three day break. One would be led to believe that there are a wealth of top-class exhibition layouts to display, but there is no such thing, in fact the three combined would be flat out presenting a great display between them. So why all one the same weekend?

As food for thought why not hold model railway exhibitions over two-day weekends. There would be a better chance of luring some of the better layouts to an exhibition as well as some of the commercial establishments. Two days staffing an exhibit is more than just punishment so why inflict a third or fourth day onto the willing hands that make the exhibitions

Vintage Victorian Wagons

The Victorian Model Railway Society is proposing to publish a facsimile reproduction of the Victorian Railways 1904 diagrams book, which will contain a diagram of all locomotives, passenger rolling stock, special cars, wagons, trucks, vans and cranes in use in 1904. Those readers interested in the project should indicate their interest to COLORTYPE PRINTING Pty Ltd, 63 Parsons Street, Kensington, 3031, so as to ensure there is sufficient interest for the book to be reproduced. Expected preproduction cost is \$16.

Rumours, Rumours, Rumours

It is often amusing and sometimes frustrating to hear some of the stories that float around club, group and exhibition meetings. Over the years these yarns and the associated meetings have assumed the name of 'Bull Sessions', the name being well applied for most of the matter being discussed is all bull, or in other words, untrue. Every modeller, no matter what his prototype or scale bias is interested in new and expected products, whether being made by large firms or the local cottage industry. Most modellers like to predict as to what will be the next model, and many, armed with a catalogue, make predictions as to when a specific model will be produced and on sale in the shops. Very few have any definite basis for their predictions, although some have 'got the word' from a shopkeeper who, in turn, knew no better.

The problem is that eventually some of these

Continued on page 50.

REVIEWS

Locomotive Guide by Gifford H. Eardley. A NSW Rail Transport Museum publication. Sample purchased from the NSWRTM Service Department. Price: \$1.20 plus postage.

Locomotive Guide is a 64 page A5 size, booklet printed on good quality paper that basically covers, briefly the history of the locomotives preserved at the NSW Rail Transport Museum at Thirlmere. In most cases a locomotive (or class) is covered on one page by relevant text and a photograph. As usual with many publications some locomotive classes receive a much wider coverage than others. The quality of the photographs is excellent and, despite a few omissions, the text is very informative for it covers the introduction and withdrawal dates, livery upon introduction, area of operation and "nick" (or pet) names.

As the book covers all locomotives preserved at Thirlmere, it is not restricted to NSWGR engines. Some J&A Brown (Nos 4 and 5), BHP, Emu Gravel units are covered as well. This would be a handy booklet, when read in conjunction with "Locomotives Beyond Recall", for they give a guide as to operation and supply relevant data for locomotives that are being modelled these days.

Bob Gallagher

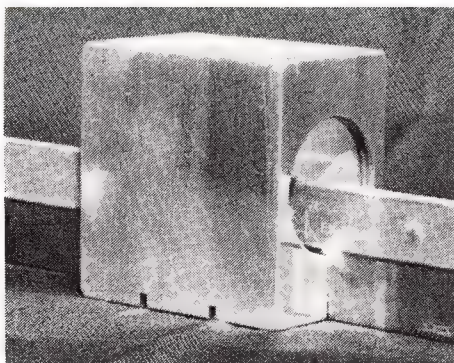
Locomotives Beyond Recall by Gifford H. Eardley. A NSW Rail Transport Museum publication. Sample purchased from NSWRTM Service Department. Price: \$2.00 plus postage.

The subject of this book can be summarised by the name of the book. It covers the steam locomotive classes of the NSW railway system that have disappeared from the scene completely. It should be read (or placed on the bookshelf) in company with "Locomotive Guide", another NSWRTM publication that covers all the locomotive classes on exhibit in the NSWRTM at Thirlmere. Between the two books all NSWGR steam locomotive classes are covered.

"Beyond Recall" is a 56 page A5 format booklet, soft covered and printed on good quality paper. The cover photo, of U105, sets the nostalgic atmosphere, which continues into the text. As indicated each locomotive class is covered, even the steam trams on a separate page. The text accompanying the photo and diagram of each class describes the builder, introduction and scrapping date, livery and operational sphere as well as personalising the locos by supplying the "nick names" that had been acquired by the respective units.

The photographic reproduction is good and the text is in an easily read style. For the NSWGR modeller who seeks information on locomotives, especially in the area of operation (and by AMRM Mailbag there are quite a few around), this book, along with "Locomotive Guide" is essential — and inexpensive.

Bob Gallagher



Combined rail gauges and cutting guides in HO, HO_N2½, HO_N3 and N gauges available from G. Duncan, 18 Waratah Ave, Glenhuntly, Vic 3163. Price: \$3.50 post paid.

These combination rail gauges and cutting guides are made from sturdy aluminium box section with a cross section measuring 38mm by 25 mm. Slots milled in the ends of the parallel sides of the box section provide an accurate gauge when placed across the track.

To use the gauge as a cutting guide it is placed in position across the track and a razor-saw is passed through the sides of the gauge and located in a vertical slot which acts as a guide for the razor-saw. Providing care is taken an accurate cut can then be made in both rails simultaneously. A useful item for use as either a gauge or cutting guide.

Ron Cunningham

PECO Fine Scale Points. Our sample supplied by Sans Souci Sports and Hobbies, 504 Rocky Point Road, Sans Souci, NSW 2219. Price: \$5.25 to \$5.95.

PECO has recently released to the Australian market its range of Fine Scale points. These points are to the same general construction as the company's Insulfrog and Electrofrog points, the only difference being in the frog dimensions. The Fine

Scales are of the Insulfrog variety and have a plastic frog. They will mate with all other types of commercially available track and points.

The distance between the frog and wing rail is .5mm more than recommended NMRA (American) standards. Nevertheless, this does not have any adverse effect on the operation of fine scale wheels through these points.

The envelope in which the points are packaged states that they are compatible with NMRA (American), NEM (European) and BRMSB (British) standards. This should, in theory, allow just about all of the commercially available equipment to go through them. Lima, Rivarossi, Fleischmann, Athearn, Roco, Bachmann, and all brass does but I found that Jouef bawled slightly and Horby rode up and over the frog. I can only suggest, therefore, that the two latter brands are not suited for these points without some form of wheel correction.

I will not go into the construction side of the points as Peco points and track have been available in this country for many years and are well known to modellers. Suffice it to say that the Fine Scales are yet another strong and robust point. They have obviously been made as an aid to Peco's entry into the American market, where fine scale predominates. Their sales in Australia might be somewhat slow due to the virtual acceptance of Shinohara as the fine scale commercial point. There one advantage over Shinohara is the fact that they do not necessarily need a form of locking device.

Allan Brown

Plastruct Catalogue. Sample supplied by Zimble Pty, 48 River Street, South Yarra, Vic 3131. Available from Plastruct dealers. Price: .75c.

Plastruct is (usually) a plastic based product that is supplied in structural material format. The plastic used is ABS plastic and Butyrate plastic. These are injection moulded, a manufacturing medium that has tight control over the final product which is left free of flash. Plastruct is easy to join either with the special "Plastic Weld" or most "super glues". It can be cut, filed, sawn, drilled, sanded or bent and can even be painted with lacquer (brush or spray).

Primarily Plastruct Inc manufactured these structural components for industrial model supplies, but over the years became aware of the application of the product to the model railway market.

The volume 1 Catalogue VI catalogue is designed for the railway modeller and his needs and covers all the Plastruct products applicable to the hobby. This covers angles, channels, I beams, H columns, rectangular tubes, square tubes, round tubes, elliptical, dished and hemispherical end cups for round tubes, stairs, ladders, ladders with cages, stair rails and hand rails, strip and sheet stock and concrete coloured sheet stock. Items for detailing piping include elbows, bends, tees, reducers, flanges, coupler valves (of various types), nozzles, pumps, motors, light covers, manholes, wheels and concrete blocks. Also included is a listing of model railway oriented kits which include a sand tower, transfer dock and skyscraper framing.

The catalogue also gives useful hints applicable to the usage of Plastruct which would be of assistance to any modeller. Usually the Australian price list is included, for prices mentioned in the text only apply to America.

Bob Gallagher

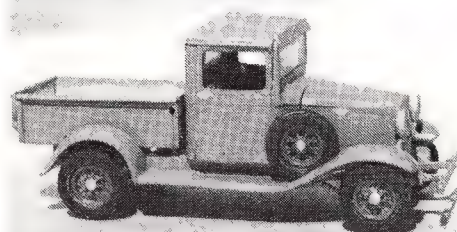


NSWR "K" Wagon Kit in HO Scale by Australian Transport Models, P.O. Box 60, Unanderra, NSW 2526. Sample supplied by the manufacturer. Price: \$3.50.

The "K" wagon was introduced to the NSW in the 1920's for general traffic. It is an open wagon with four foot sides and a capacity of 25 tons. As introduced the wagon had diamond shaped pressings in the end and side panels but the ends were later strengthened with dreadnought ends. The kit is a version of the original style.

The kit is a one piece unit which, to run, needs only the addition of PMH underframe. The frame is supplied along with underframe detail. The sample inspected was a pre-production sample which, unfortunately, is too high, the sides being 12 inches too high. The inaccuracy does not become evident until the wagon is placed alongside a vehicle of the correct size. The moulding of the "K" as a one piece unit produces an unusual vehicle for it has a battered and worn appearance which enhances the model. No doubt when it is released it will be the correct size and, hopefully, will retain the battered look.

Bob Gallagher



The Wheel Works — 1934 Ford Pick-Up (Coupe Utility) — Supplied by Aspect Models 9 McGregor St, Canterbury, Vic, 3126. Price: \$10.95.

This kit is complete except for adhesive and paint. Nearly all parts are well made white metal castings and almost free from flash.

On our kit the chassis did not travel well but the front mudguard was successfully burnished and bent back to shape.

There is a mistake on the kit with the hood to cowl (bonnet to firewall) joint, which does not mate correctly; however careful assembly and painting will diminish the problem.

We had difficulty with adhesives and our third try, using Super Glue, was moderately successful. The problem could have been excessive release agent but it did not respond to solvent wash or scraping.

The assembly is straight forward and we liked the separate wheels and tyres, even though considerable fitting time was necessary.

Both Front and rear suspension assembly occupied about half the total assembly time. As received the front wheels were rubbing on the front mudguards and there was about 12 inches between the rear wheels and guards. Considerable rework was necessary to avoid the look of a vehicle "always running down a steep hill".

We painted the model mid-grey with red wire wheels (known to be a standard colour) and the result was worth the effort.

We glazed front and rear, with the material supplied, and again it was worth the effort.

In summary I have to say that this is a kit requiring moderate skill and a lot of patience but it will produce a model for your display case and help to make your steam era railway believable.

Max Chaseling



"Old Man Walking" in HO scale by Weston Scale Models. Sample supplied by the importer, Ferara Distributors, 5/8 Olive Grove Dandenong Vic., 3175. Available from most hobby shops. Price: \$2.15.

Figures (or figurines) are used to create an atmosphere of life, and Weston Mini-Figures (a division of Campbell Scale Models) supply a number of delightful figures that can be used in numerous ways on a model railway layout. The "Old Man" stands (in a stooped position) 5"10" high. He is a pre-painted metal casting and is dressed in grey trousers and brown leather coat. The brown rimmed hat shades his handle-bar moustache and the walking stick is included to complete the model. The facial expression is evident on this fine piece of scale detailing.

Bob Gallagher

LIMA-MINICON: Model Train Controller.

Our sample supplied by Platform 3, Concord. Available from Lima outlets. Price \$19.95.

The unit has the following specifications: input 240 volts, A.C., output 12 volts D.C. 4.2VA. The unit is double insulated for safety. The controller is manufactured in Australia by General Power Controls.

The cabinet is moulded polycarbonate which has a

slide potentiometer for speed control, slide switch for direction and plated 1/8" whitworth studs for connection of wires to the rails. The slide potentiometer is not protected against dust entry and will undoubtedly cause trouble in the future.

The controller is an SCR type design with a transistor overload protection. The components which are of normal domestic standard are mounted on a bakelite printed circuit board. The transformer is a standard commercial 5VA unit, it is good to see the output downrated to 4.2VA for added reliability.

The controller was used continuously for about three hours with an N gauge layout which should have been well within the capabilities of the unit. However, at the end of this period slow speed operation became jerky and finally the controller would not work. The unit was allowed to cool down and operation was again satisfactory. This intermittent malfunction may have been caused by overheating in the transistor overload circuitry. Whatever the case such a malfunction is unacceptable for operation of this type of unit which would be used by newcomers to the hobby.

The 4.2VA rating of the unit corresponds to a current rating of about 350mA which is adequate for a Lima 44 and similar locomotives. If the above problem can be rectified the unit should give satisfactory operation for new members to the hobby.

T. Moore.



Spring Pic by Kadee. Sample supplied by the importers, Ferara Distributors, 5/8 Olive Grove, Dandenong, Vic. 3175. Available from most hobby shops. Price: \$1.75.

This tool is specifically designed to hold the tiny springs used with Kadee Couplings. A plastic handle supports a specially shaped metal spigot that can be inserted between the coils of a coil spring, holding it firmly while the spring is worked into position. It is necessary to use this tool to fully appreciate its usefulness.

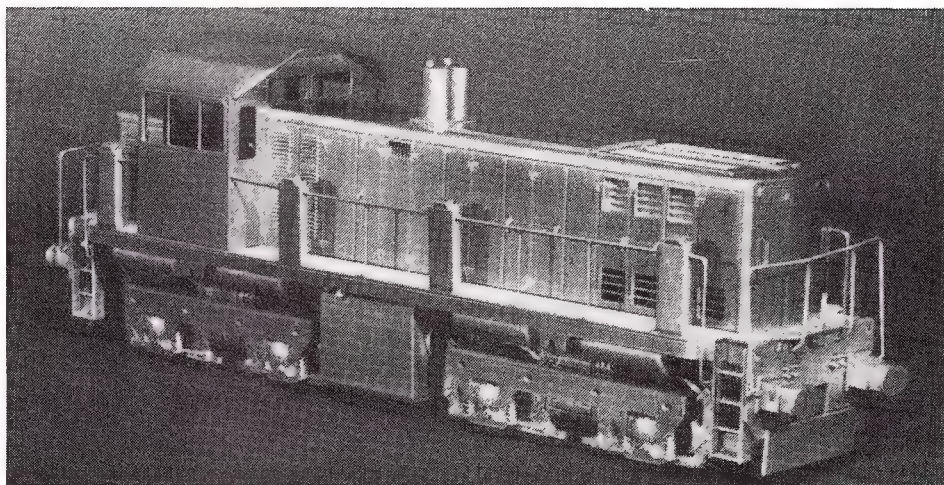
Bob Gallagher

TAIG MICRO LATHE 11 (kit) imported by Southside Distributors, P.O. Box 183 Port Kembla 2505. Price: \$280.00.

For many modellers a lathe has become an essential instrument for the reproduction of many components in a model. The modern hobbyshop can supply most requirements now-days but the special model many components have to be made and a lathe becomes extremely useful. Wheel turning and trueing, turning metal/brass into buffers, dones, etc., are just a few uses for the model railroader.

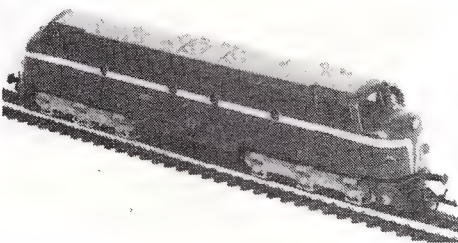
The TAIG 11, differs from other small modelmaking lathes in that it is a kit, although not a kit as Australian modellers are used to. The only major assembly procedure is to bolt the lathe bed (including head and tail stock) onto a flat timber base and then mount the electric motor in the correct position. Most components are imported from America but the motor is a GMF Australian made unit. Supplied in the kit are:— basic lathe, head stock, 3 1/4" three jaw chuck, 3 1/4" diameter face plate and angle bracket set, 1/4" Jacobs chuck, 7 piece tool bit set, drill chuck adaptor, tailstock assembly with dead centre, 6 speed pulley set with drive belt and motor and assembly instruction sheet.

The overall length is 16 1/2", while the lathe bed is 15" long. The swing over the cross slide is 2 3/8" and the swing over the bed is 4 3/8". The distance between centres is 9 3/4", the cross slide travel is 1 3/4", the carriage travel 5", the drill chuck will hold up to



1/4" and the tool bit size is 1/4". The cross slide is graduated in .001 increments and the tool post may be angled for most duties. The tool range is adequate for model making and the speed range an asset. Most components are aluminium extrusions but the bed is a steel plate, essential for trueness. The unit is easy to operate and handle.

Bob Gallagher.



Berliner Bahner TT scale Diesel Locomotive. Our sample supplied by the importer B. H. Winn Pty. Ltd., 104-108 Mount St., North Sydney, N.S.W. Price: Not known as at time of review.

This loco is the European 'General Motors' Co-Co diesel electric unit designed by Nohab of Sweden and used on a number of European railway systems. The model reviewed was in the Belgian Railways colour scheme with quite good painting and linein detail.

Constructed to the European 1:120 scale, the model is of moulded plastic with sharp body detail. The loco performs well with excellent slow-running characteristics. The model drives on two axles on each bogie via a drive system reminiscent of a diesel hydraulic and based apparently on the former Zeuke system.

If demand is shown, the importers propose to supply a range of items in this scale. This model and others which will be reviewed in later issues of AMRM could well make this scale again quite popular.

Graham Ahern

73 Class Diesel Hydraulic Loco of the PTC in HO scale. Sample supplied by Berg's Hobbies, 223 Church Street, Parramatta NSW 2150. Imported from Japan by the supplier. Price: App \$150 (depending upon currency fluctuations).

Introduced to the NSWGR in 1970 the 73 Class was built by Walker Ltd., of Maryborough, Queensland, to a design based on units in use in Queensland (DH). (The diesel hydraulics of Walker's are being

covered in a series of articles in AMRM.) The 73 Class is 36 feet (10.97m) long and has a Caterpillar V8 prime mover which exerts 700hp at 1300rpm. The maximum speed is 45mph. At first only 20 units were ordered but before the order was completed a further 30, a total of 50, were ordered. These are numbered 7301-50.

Since delivery a few changes have occurred (including paint schemes which will be covered in the 73 Class article) which have slightly altered the appearance of the locomotives. The side windows of the first 20 have been altered similar to those of the second series and, in most instances, the pilot (cow catcher) has been straightened. This was necessary for the pointed pilot fouled other units, when coupled in multiple, and the low skirts of express passenger stock (Indian Pacific).

Basically the 73 Class is a shunting loco and can be found in most, if not all, large marshalling yards in NSW. They can, and are, run in multiple and although they do not have vigilance control, they do operate some short main line trips. The first and last trip from Enfield to Botany, mostly with a load, is but one instance. They are painted in NSWPTC Indian Red with a yellow stripe and yellow vees on each end. (This will be covered in-depth in an article on the 73 Class which should be published soon).

The model, which is the latest import from Japan by Berg's Models, represents the latter (altered) units, for it has the 3 section window and a straight, unperforated, pilot. Handcrafted in brass it is a combination of brass etching, pressing, investment casting and good assembly work. The model closely follows the measurements of the prototype erring only up to 2 scale inches in one or two instances. All detail is represented except the headlights on each end and the horns on each cab spectacle plate (it should be said that the model reviewed is the pilot model and these two omissions may have been overlooked in the haste to despatch it from Japan). All louvres are in place as are the door handles. The open grids are so represented with the bar protectors in place. Brakegear is represented on the bogies as are the sand boxes and fine hand rails on the footplate. The oval buffers are not sprung but the multiple unit sockets are in place, also the brakeline cut-off cocks. Air reservoirs are soldered under the chequerplate footplate and the fuel tank covers the universal shaft. The body can be removed from the chassis by undoing four screws and a little manoeuvring of the handrails. Provision is made for kadee couplers.

The power plant is a can motor that drives all four axles via a gear chain and a universal shaft between bogies. The pilot model ran smoothly, although a little noise is evident. Slow speed running is possible with even a rheostat and the top speed would not break any records. It is a powerful unit hauling on test, unweighted, equivalent to 36 (4 wheel) vehicles up a 1 in 30 grade. There is evidence that some additional weight will be required inside the body to keep the bogies on the track.

Summing up, the model reviewed (the pilot model) is an extremely accurate model, well assembled and would be a source of power as a shunting unit in a diesel-era yard or on a short branchline.

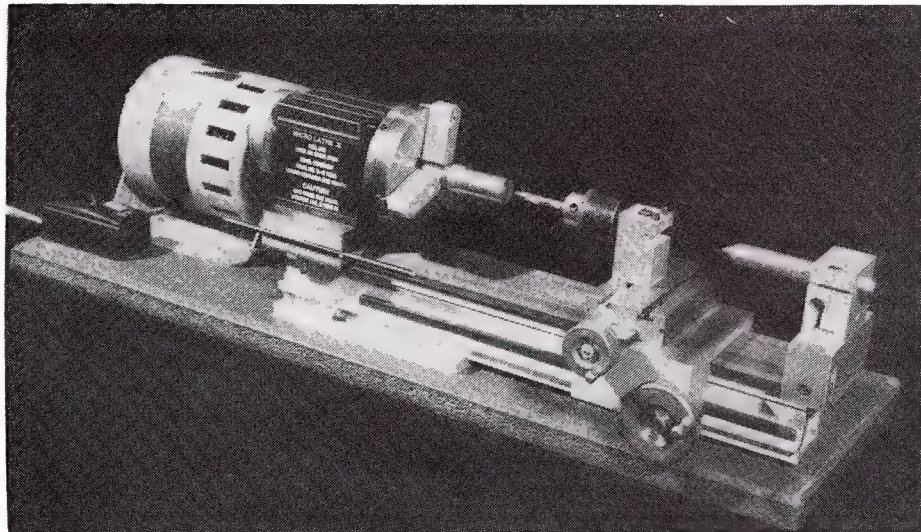
Bob Gallagher

NSWGR K(1353) D55 Class Locomotive and Tender Plan in HO Scale by DATA SHEET, 21 West Street, Paddington, NSW 2021 who supplied the copy for review. Price: \$1.20.

Introduced to the NSW railway system between 1918 and 1925, the 120 locomotives in this class were unique. They were probably the only class of locomotive outside the USA fitted with Southern valve gear. Delivered with tapered boilers, the class were fitted with "Standard Goods" boilers during the thirties.

The latest DATA SHEET plan is the usual well detailed drawing of the class as delivered with "Wampu" tender and tapered boiler. As well as elevations, plans and sections of the locomotive and tender there are two photos of the loco as delivered and after re-boiling. Unfortunately the photos of

Continued on page 50



REVIEWS

Continued from page 49

the sample supplied were wrongly captioned.

As usual the standard of drafting and presentation of the DATA SHEET plan is excellent. It should be pointed out that the drawings are of the class — leader, as delivered, and does not show the many alterations which were made by mechanical staff during each individual locomotive's life. Keeping this in mind these drawings should be used in conjunction with photographs to detail a model.

DATA SHEETS, this one included, are well worth buying for the collector, historian or modeller.

Ian Thorpe

AMRM NEWS.

Continued from page 47.

stories are believed and in due course a modeller becomes disenchanted with the hobby because the story is not true, for eventually the stories are related from one to another, each time receiving a little extra 'colour' from the storyteller to a point where eventually the story is so twisted that any of the original matter which was true has been discarded in the telling.

Of course we all enjoy swapping yarns and making out we all know what is going on, and one would hope that this joy will never be halted, but a line must be drawn as to how these stories are related in printed form, for too many people are swayed by the printed page and if the story is untrue in the first place any publication of the matter can only lead to harm, which is eventually placed at the manufacturers feet, and in many cases he is blameless but soon tires of the relentless pressure and drops out of the scene.

Who is to blame? Can it be stopped? Neither question can be realistically answered but maybe we can sort out of few reasons for the inaccuracies. In many cases the story originates at the local hobbyshop where the harassed storekeeper tries to pacify a belligerent customer with "Oh, that model has been cancelled" or "It will be in next month", when neither answer has any true basis, or the shopkeeper has been promised the goods by the wholesale salesman who is trying to fill his order book with models not yet available. We should always bear in mind the credibility given to salesmen, for it is their job to sell a product whether it is available or not. In other instances the shopkeeper uses the stories to obtain an idea as to the popularity of a model, by indicating that he is to produce it, but when advance orders are not sufficient, the programme is cancelled when in fact it was never programmed. There has been an instance recently where a model was announced and the price increased by 50%, and that was months before it was to be released. All prices originated with the one specific area and caused much disappointment. It is obvious that manufacturers, importers and shopkeepers should either make a press statement or at least brief all their staff with the same story.

We at AMRM have a responsibility to be reliable and truthful in our reports and statements, and to this end we endeavour to substantiate the facts with the organisation from which the models originate. In many instances we are sworn to secrecy and as such cannot divulge the matter at hand but in most instances we are able to relate the news 'straight from the horses mouth' so to speak.

To this end let us refute a few of the stories at hand; The inference that both LIMA and JOUEF have

cancelled plans to produce a D59 class is not true, for neither firm has ever made a commitment to manufacture the unit. LIMA confirm their intention to produce a model by including it in their catalogue, although in many cases the catalogue is printed before the final research on the model is completed; There is another tale in existence that AMRM is produced by SCMRA members and while it is true that many of the staff are members of SCMRA (AMRM is the official publication of the SCMRA) the majority of AMRM staff is drawn from its readership, which includes members of many modelling groups, including AMRA; Also refuted is the tale that Workshop 5 Models has been brought out/taken over/gone bust or whatever. Workshop 5 are still producing their models which are distributed to the public by TC Rail Models under the brand name of RAILKITS Australia. Like many we question the need to change brand names but we have received full assurance by all principals that no other manufacturers will have models released under the name of RAILKITS AUSTRALIA except Workshop 5 Models.

In conclusion AMRM cannot accept any responsibility for the content in Advertisement which have in the past announced the production of a model which has never eventuated.

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The Readers Award for 1977

Despite a very poor response to this award we have pleasure in announcing that it was won by Ian Thorpe with his article on Yass Town. Runner up was Ted Gray's layout 'North Rocks Rail' and third Trevor Carter's Circus Trains. Although the response was poor we at AMRM commend all authors for their contribution to AMRM, if only a larger portion of the readership would show their gratitude.

Hospitality

Every now and again a member of AMRM staff journeys interstate to gather, first hand, details and also view the work of local modellers. On virtually every occasion the welcome mat, put out by the local modellers, is so warm that it is difficult to leave. On behalf of AMRM staff, I want to thank all those modellers, particularly in Melbourne and Brisbane who have made out stay so enjoyable.

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We begin this article with an early reminder to members that the ANNUAL GENERAL MEETING will be held on 28-8-78. Please make a note of this date.

In this Yardmaster I would like to make some comments on couplings. To some members it may seem that I am always doing so, but I feel the need once more to stress the importance of correctly adjusted and operated couplings.

Initially I was one of the few not in favour of changing couplings as the Mantua type then in operation, although not authentic in appearance, worked very efficiently in operation. As Mantua couplings were no longer available a change was necessary, especially for new members to be able to run their stock on the club layout.

Of the types available K Dee does seem the best choice, especially in appearance. One exception possibly would be a rack railroad where the rack would foul the K Dee glad arm.

Having had time to observe K Dees in operation since the Clubs conversion, I would like to make these comments. 1. Couplings must be correctly adjusted and experience has shown a variation in adjustments by different members. Only the most exacting tolerances should be accepted as OK. 1. Even correctly adjusted couplings in constant use on the Club layout come out of adjustment. This is attributed to a number of reasons. Vehicles transported each night in boxes with no provision to safeguard the glad arms from being knocked. Shunting into buffers where the glad arm knocks a bar at the bottom, or into dead ends where no buffers are fitted. On the Club layout correction of this is top priority. 3. K Dees do not work well on curves and this causes difficulty sometimes in the placement of ramps. Truck mounted K Dees will work better on curves but the fitting on some vehicles is difficult. Truck mounted couplings mated with body mounted couplings are also not compatible on curves. Ideally all couplers should be truck mounted on a model layout unless very large radii curves are used. 4. The centering springs come out of adjustment and, although there is some movement (enough for uncoupling) delayed uncoupling fails. It has been decided not to use delayed uncoupling and place sufficient ramps in to uncouple cars where required.

On timetable operation there is a minimum of 300 couplings operations, so in order to maintain timetable working cars found out of adjustment will be removed from the layout and replaced by cars from the Club pool until such faulty cars are correctly adjusted. A cabinet will be provided to store Club cars not in use and provide a pool of working vehicles.

Changing the subject; I am pleased to report that a prototype transistor throttle has been produced and tested but before installing these on the layout further development is being done to increase its features. No load compensation will be incorporated as I feel this defeats our purpose of driving trains. No engineer can open up the throttle then sit back to enjoy the trip regardless of what terrain he is travelling through. A break is being developed to give some feel to the driver, also further work is being done to remove the tendency of this type of throttle to vary vastly with trains of different types in relation to inertia. This I feel is a most annoying feature.

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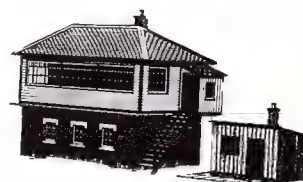
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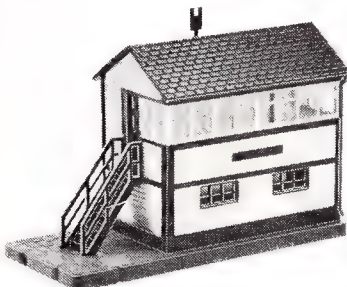
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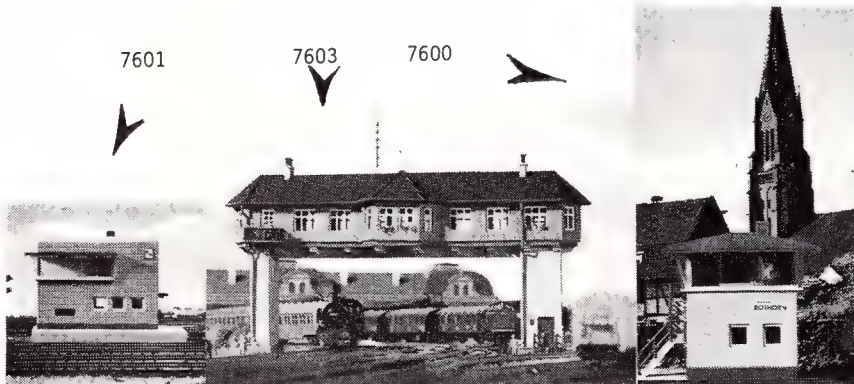
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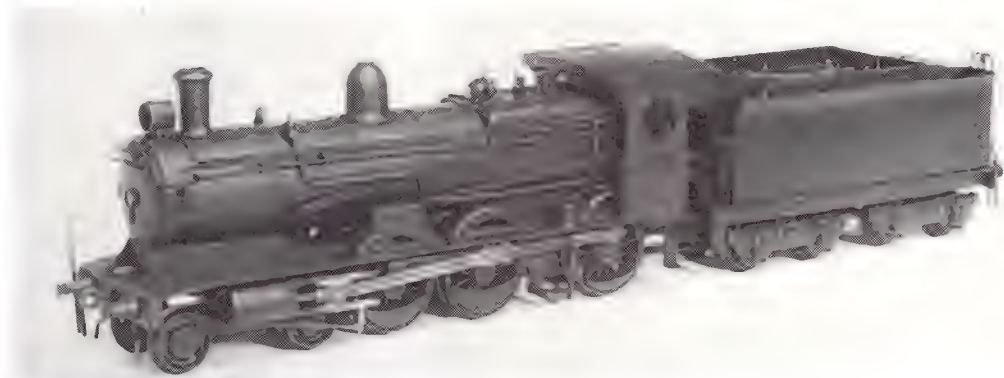
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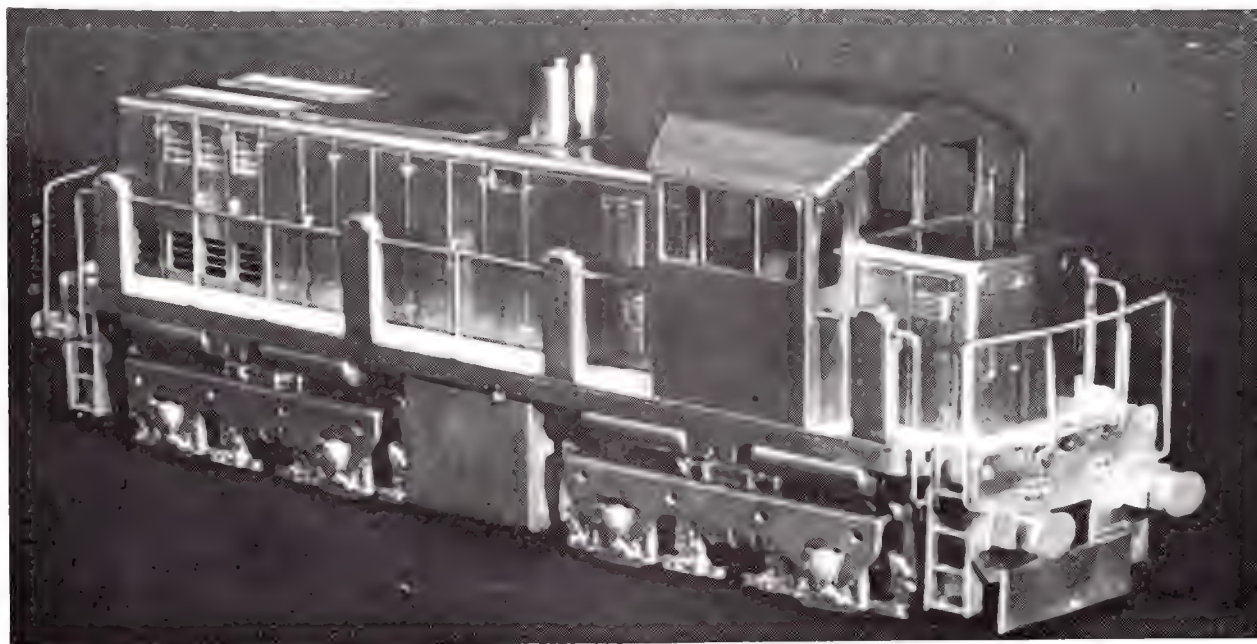
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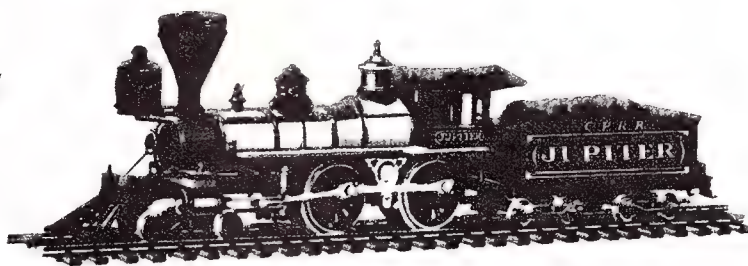
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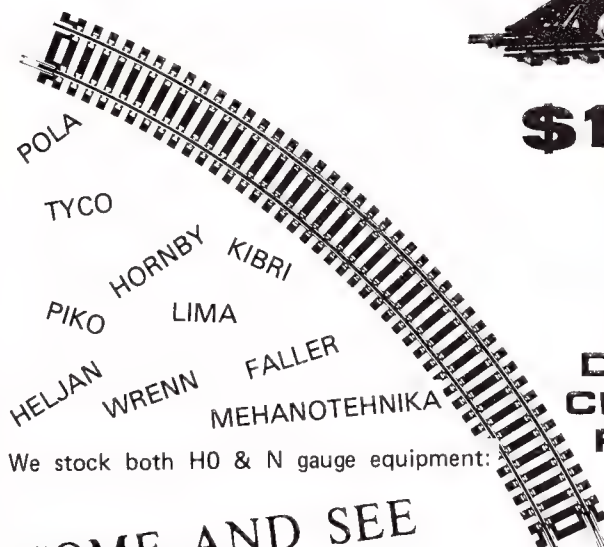
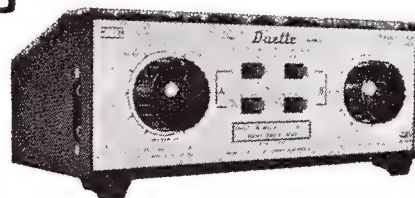
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Other News From The Dockyard.

Continued from page 3

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Continued on page 62.

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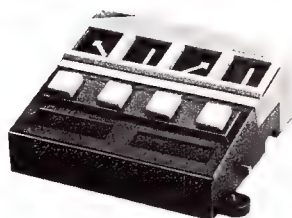
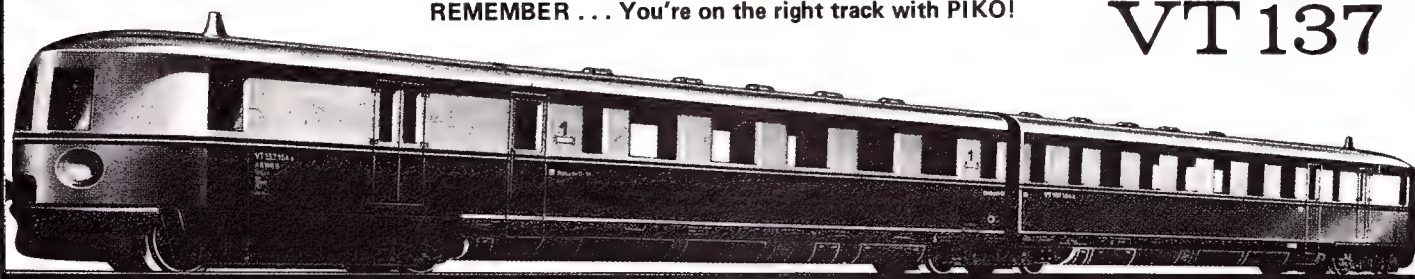
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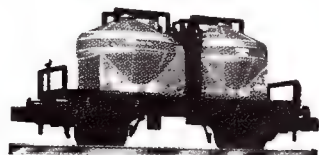


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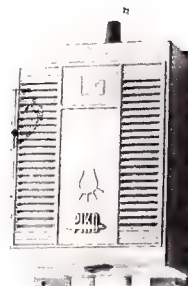
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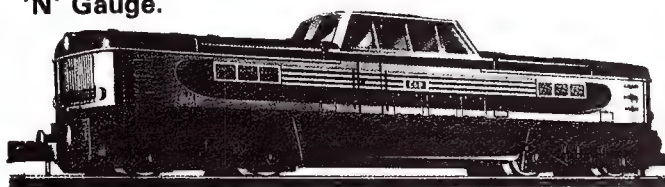
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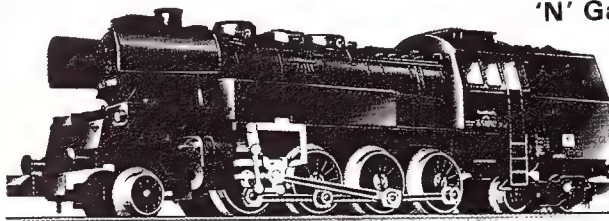


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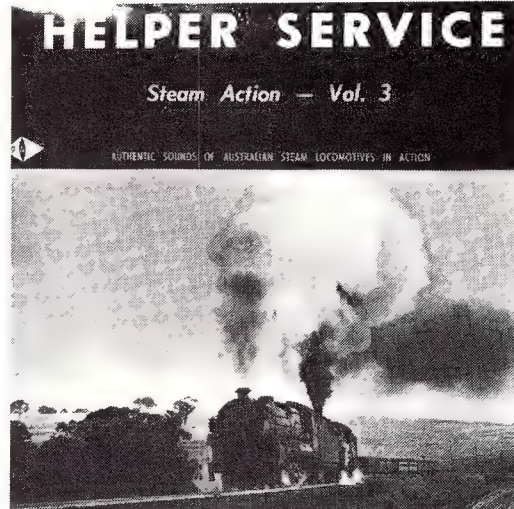
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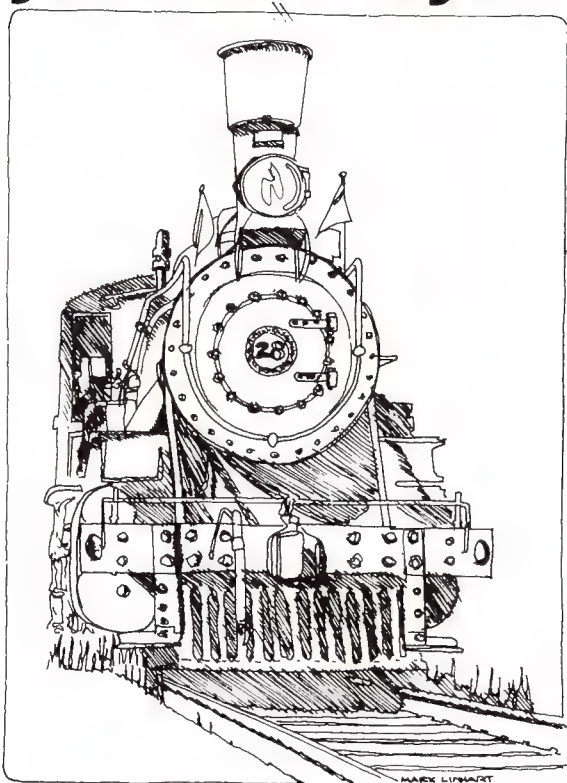
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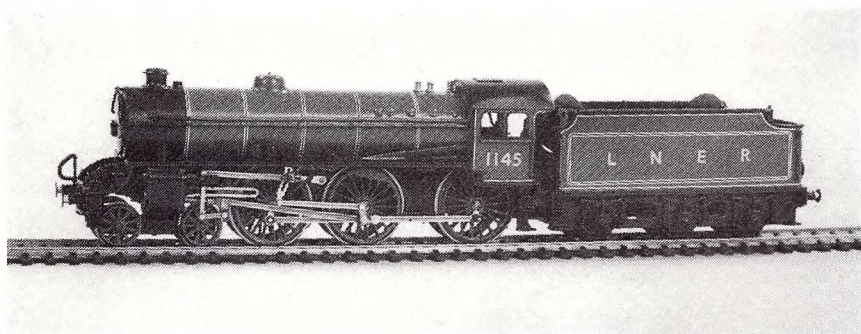
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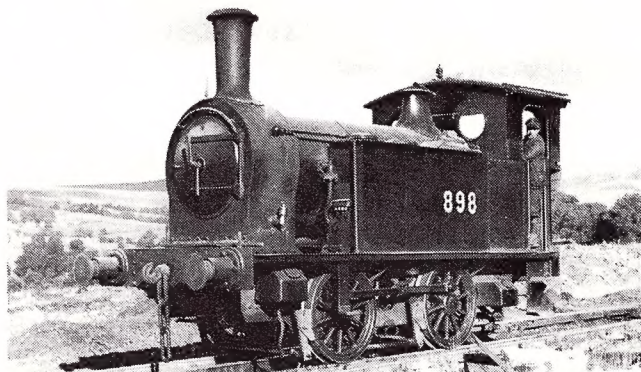
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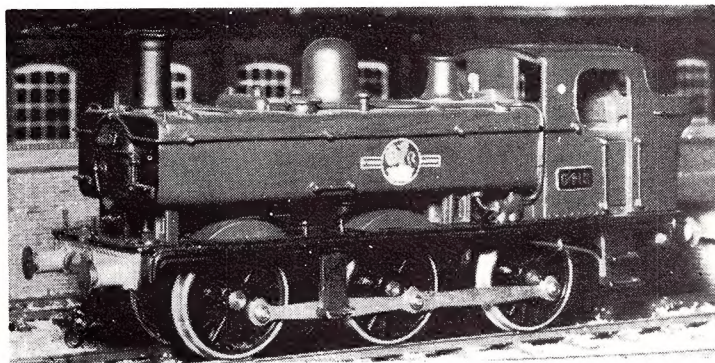
A useful little shunter for dock areas, loco
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Cat No N.C. 117 . . . \$28.05



L.N.E.R. Y7/N.E.R. H/N.C.B. 0-4-0T DOCK AND INDUSTRIAL SHUNTER

Requires 14 m.m. wheels, 40:1 gears and K's Mk. 2 motor.



G.W.R. 54XX/64XX/74XX 0-6-0 PANNIER TANK ENGINE

Requires 20 m.m. or 21 m.m. (54XX), 18 m.m. (64/74XX) wheels,
40:1 or 30:1 gears and XO4 type or K's Mk. 1 motor.

(Top feed as shown in photo is an optional extra and is not included)

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MARKET PLACE.

Continued from page 56.

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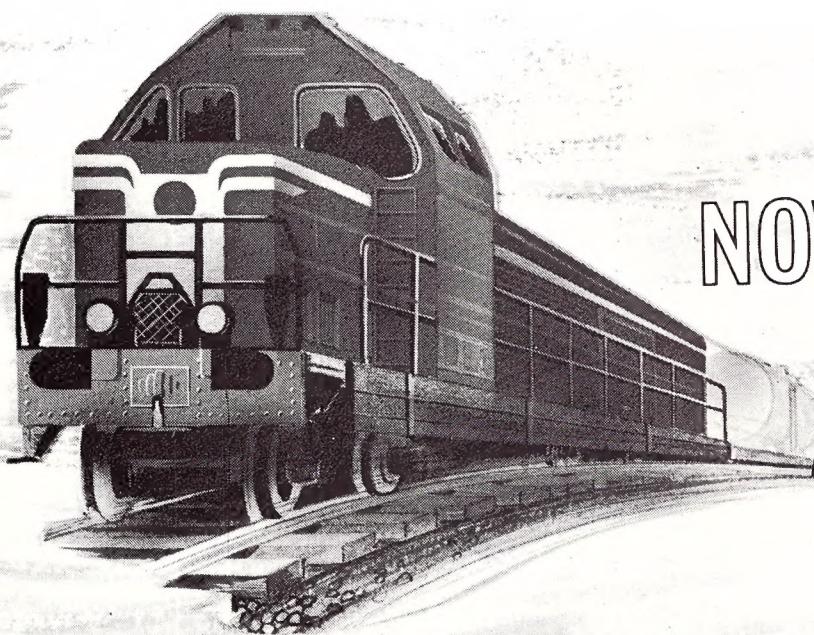
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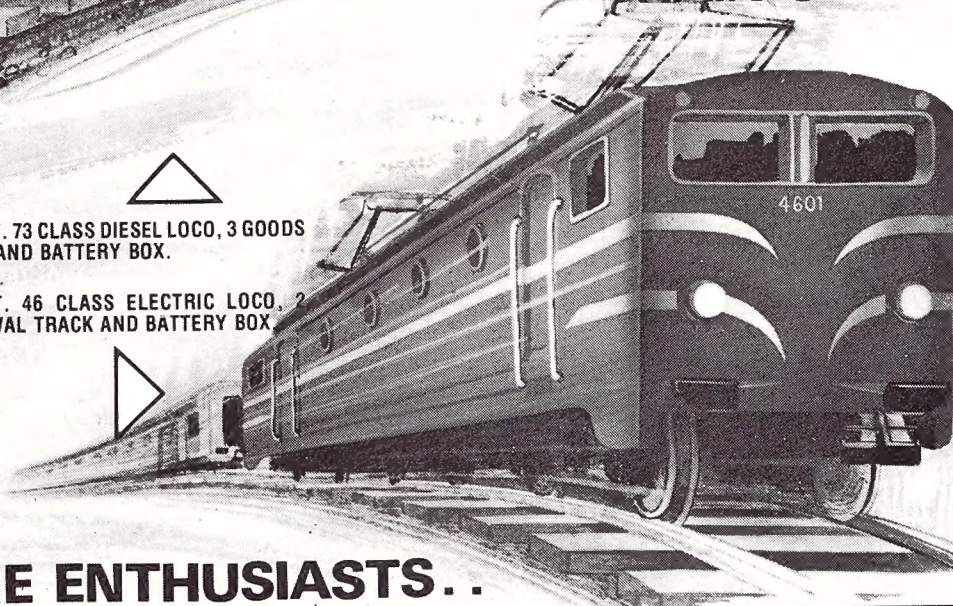
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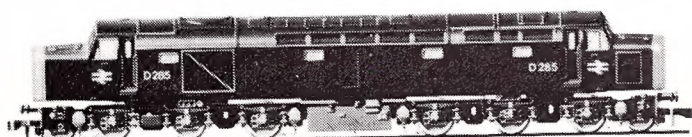
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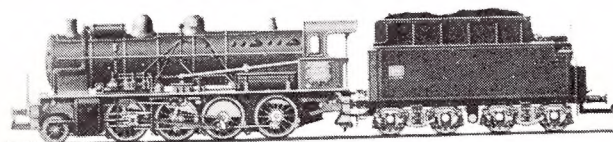
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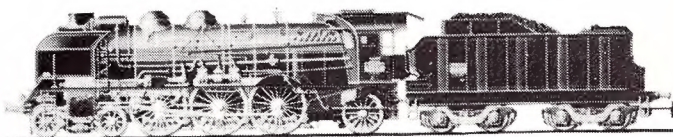
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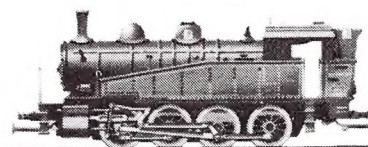
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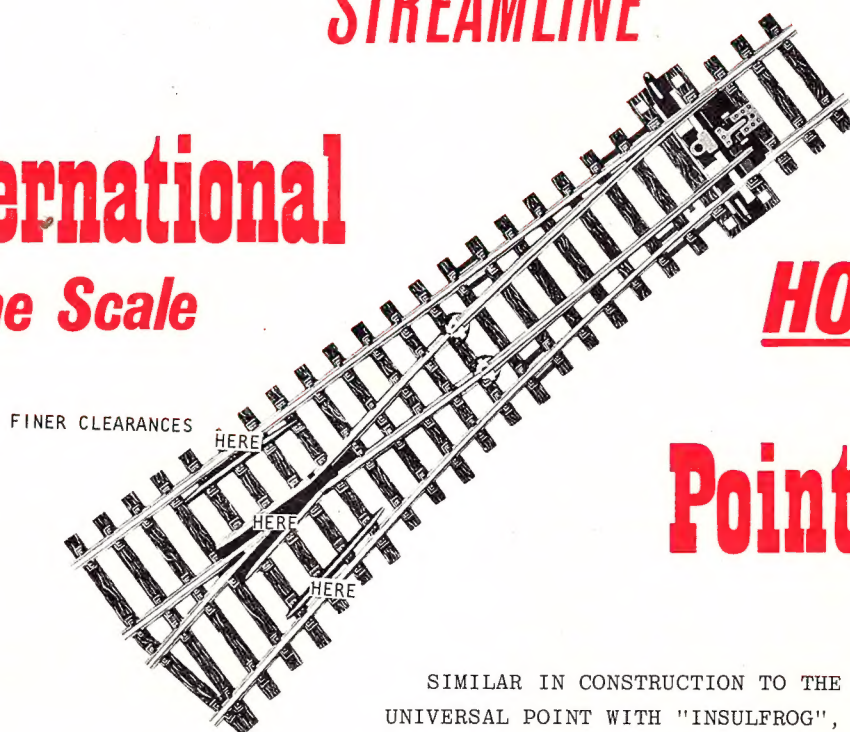
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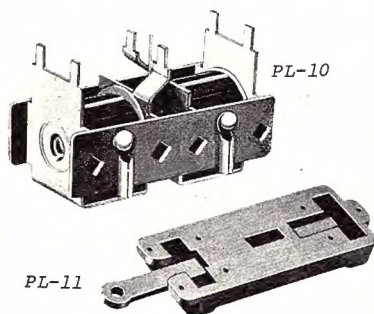
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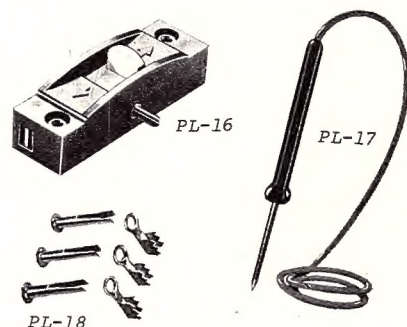
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